Oral Abstract Presentations

GS01

"It's Different When Your Prosthesis Is A Bag" Experiences of Persons Living with an Ostomy: A Photo Elicitation Study

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Aim: To explore the experiences of persons living with an intestinal ostomy using the adjunct of photo-elicitation with interviews.
Background: The creation of an intestinal ostomy results in the revision of an essential bodily function and an alteration of the body image and causes physical, psychological, and social changes in the lifestyle through the adjustment and management of the new condition (Knowles et al., 2014). There are currently no ostomy studies that use photo-elicitation.
Methods: In this qualitative descriptive design, content analysis was used. Ten people living with intestinal ostomies each took part in two semi-structured interviews that utilized the strategy of photo-elicitation to collect the data. The first interview utilized pre-existing photos, and the second interview utilized photos that the participants took specifically for the study. Meleis' transition theory was utilized as a sensitizing theory.
Results: Seven categories emerged from the data analysis. The categories were body, feelings, healthcare, coping, finances, life impact, and relationships. Thirty percent of the interview content was related directly to the photos shared, with each photo eliciting an average of 150 words. All phases and patterns of Meleis' transition theory were represented in the data. (Meleis, 2010).
Conclusions: This study highlights the impact of an intestinal ostomy has on people's lives. As participants transitioned to their new reality, it became apparent that they had to adjust to their sense of self, physical being, lifestyle, social and intimate relationships, and the financial implications related to their illness and ostomy supplies. Participants in the study did experience a transition as coding results confirmed the phases and patterns of Meleis' transition theory. Photo-elicitation is a beneficial adjunct for data collection with persons living with an intestinal ostomy.

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Wound-Clinical Care Innovations

GS02

Neonatal Intensive Care Nursing Pressure Injury Prevention Practices: A Descriptive Survey

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ABSTRACT
TOPIC/INTRODUCTION: Pressure injury prevention practices in the neonatal intensive care population are not well understood especially for pressure injury risk assessment, pressure redistribution uses or moisture management. PURPOSE: The purpose of this study was to explore neonatal nursing practices for neonatal pressure injury (PI) risk assessment, pressure redistribution surface use, and moisture management. METHODOLOGY: A descriptive survey of a sample of 252 neonatal nurses from the United States responded to a survey distributed electronically through the National Association of Neonatal Nurses, the Academy of Neonatal

Nurses, and on the Wound Source Web site. Nurses responded to questions that explored what neonatal nurses used to assess PI risk, types of pressure redistribution surfaces used for neonates, and what moisture management strategies were used to prevent PIs (Pressure injuries). Descriptive statistics were used to describe nurses' practices. RESULTS: When assessing risk, 78% (n = 197/252) reported using a risk assessment scale: the 2 most common scales were the Neonatal Skin Risk Assessment Scale and the Braden Q Scale. Sixty-nine percent (n = 174/252) reported using a rolled blanket or small soft object as pressure redistribution surfaces. In addition, 15% (n = 39) reported the use of several types of positioners such as a fluidized positioner as a pressure redistribution surface; however, they are marketed as a positioning device. It appears that these interventions were considered redistribution surfaces by the nurses. For moisture management, petrolatum-based products (6.7%; n = 17/252) and ostomy powders (6%; n = 16/252) were most frequently used. CONCLUSIONS: Practices for PI prevention are different for neonatal patients due to their gestational age, size, and level of illness. Findings from this study create a beginning knowledge of and an opportunity for further research to determine how these practices affect outcomes such as PI incidence and prevalence.

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2. How-to guide: prevent pressure ulcers — pediatric supplement | IHI - institute for healthcare improvement. Accessed April 11, 2021. http://www.ihi.org:80/resources/Pages/Tools/HowtoGuidePreventPressureUlcersPediatricSupplement.aspx
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Ostomy-Quality

GS03

Benefits of providing a single-session, in-hospital preoperative education program in patients undergoing ostomy: a randomized controlled trial

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1. Topic/Introduction
Patients who undergo ostomy have a reduced quality of life due to ostomy care. In order to quickly and properly adjust to their changed bodies after ostomy, patients must acquire sufficient ostomy self-care skills through dedicated stoma education. While the changes in many healthcare systems compel healthcare professionals to shorten the duration of hospital stay, stoma education cannot be spared for the sake of patients' safety and quality of life.
2. Purpose
This study investigated the effects of preoperative stoma education on self-care knowledge, self-care proficiency, anxiety, depression, length of hospital stay, and stoma-related complications.
3. Methodology
Patients were randomized into the intervention group (n=21) or the control group (n=20). The control group underwent stoma site marking and three postoperative education sessions, and the intervention group received a single 45-minute session of video-based preoperative stoma education along with stoma site marking and postoperative education. Self-care knowledge,

anxiety, and depression were assessed with a questionnaire, and self-care proficiency was assessed via direct observation using a checklist. Stoma-related complications were evaluated by a stoma nurse. Length of hospital stay and disease-related characteristics were analyzed from medical records.

4. Result

Compared with the control group, the intervention group showed significantly superior improvements in self-care knowledge (Z = -5.599, *P* < .001) and self-care proficiency scores (Z = -5.543, *P* < .001) Furthermore, the intervention group showed decreases in anxiety (Z = -2.247, *P* < .025) and depression scores (Z = -2.463, *P* < .014) as well as shorter hospital stay (Z = -2.661, *P* = .008) and less stoma-related complications (T = -4.980, *P* < .001).

5. Conclusion

In patients undergoing ostomy, a single 45-minute session of preoperative video-based stoma education was effective in significantly improving the self-reported outcomes and reducing stoma-related complications.

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Continence-Clinical Care Innovations

GS04

An external female urinary management device: A quasi-experimental study

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Topic: Historically, indwelling urinary catheters have managed urine in critically ill females however, catheter associated urinary tract infections (CAUTI) is a complication of these devices accounting for nearly 70% to 80% of healthcare acquired infections. This risk increases 3% to 7% each day the device is in place. Therefore, it is beneficial to manage urine in critically ill females with an external urinary device, obtain urine output measurements, and avoid skin injury including incontinence associated dermatitis (IAD).

Purpose/Aims/Research Question: To examine the use of an external female urinary management device in critically ill women unable to self-toilet.

Aim 1. Examine the proportion of urine loss compared to total urine output when using the external female urinary management device.

Aim 2. Explore unit indwelling management device utilization and CAUTI rates from 2016 as compared to 2018 and 2019.

Aim 3. Examine unit and overall prevalence of urinary incontinence (UI) and IAD 2016 as compared to 2018 and 2019.

Study Design/Method: This quasi-experimental study will examine the use of an external female urinary collection device in critically ill women unable to self-toilet. For aim 1 data was

collected prospectively; aim 2 and 3 compared historical pre/post external female collection device implementation data.
Results: The external urine management system successfully collected 83% of urine. Indwelling urinary catheter use was significantly lower in 2018 (40.6%) and 2019 (36.6%) compared to 2016 (43.9%, $p<0.01$). CAUTIs were lower in 2019 than in 2016 (1.34 per 1,000 catheter days versus 0.50, $p = 0.57$). The percent of incontinent patients with IAD was 69.2% in 2016 and 39.5% in 2018-2019 ($p = 0.06$).
Conclusion: This study validates the effectiveness of the external female urinary management device as an alternative to an indwelling urinary collection device to divert urine, manage incontinence, decrease the risk of a CAUTI and IAD.

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Ostomy-Quality

OA01

Elderly Partners' Experience of Bladder/Colorectal Cancer Diagnosis, Surgery, and Ostomy

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Topic/Introduction: Bladder and colorectal cancer (CRC) are aggressive types of cancer with treatment creating physical and psychosocial comorbidities affecting the quality of life of patients. Numerous studies were conducted on experiences and needs of these patients, but studies on the elderly partners (65-84 y/o) was negligible, thus, they may have distinct experiences, needs, and challenges that are unknown and warrant attention.
Purposes: The purpose of this study was to illuminate the experiences of elderly partners of ostomates, 65 to 84 years old, with bladder and/or CRC.
Methodology: Giorgi's descriptive phenomenological method and narrative descriptions were used to address the knowledge gap. Partners of ostomates with bladder or CRC, 65-84 years of age, English reading and speaking, cognitively intact (Mini-Cog™ with Clock Drawing Test score of 3-5), literate at better than the 6th grade reading level (Rapid Estimate of Adult Literacy in Medicine—Short Form, score >4), and agreed in one-on-one audiotaped interview constituted the sample. The interviews were taped, transcribed, and analyzed to identify themes.
Results: Eleven participants recruited from ostomy support groups from three counties in a western state were partners of ostomates with bladder and/or CRC. Three Caucasian males and eight females met the inclusion criteria, completed the interview, and constituted the sample. Five themes emerged that illuminated the partners' experience: (a) feeling supported, (b) providing support to the ostomates with cancer, (c) expressed needs, (d) accepting/adjusting to diagnosis/treatment/ostomy, and (e) advocating for the ostomate.
Conclusion: The findings suggested that the young- to middle-old adult partners' experiences mirror those of younger partners of ostomates with bladder and/or CRC, but their experiences differed in their expressed needs and the lack of importance of sexuality. The findings may serve as the foundation for future studies to improve the care of the elderly partners of ostomates with a bladder and/or CRC.

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Wound-Symptom Science

OA02

Effect of a cooling intervention on pain and physical activity in patients with recently healed chronic venous leg and diabetic foot ulcers: A randomized-controlled trial

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Topic/introduction: Individuals with chronic leg (VLU) and foot (DFU) ulcers show high physical and functional morbidity, including pain and walking limitations, in spite of ulcer healing.
Purpose: This aim, part of the larger self-management*MUSTCOOL*(cooling) intervention study to reduce ulcer recurrence, tested the clinical efficacy in individuals with recently healed VLUs or DFUs on pain reduction and physical activity improvement.
Methodology: Longitudinal randomized-controlled trial design. The cooling and placebo interventions comprised cooling or cotton-filled pack application to recently healed skin for 30 minutes, 3 times/week over a 6-month period. Pain severity and intensity was measured with the Brief Pain Inventory and physical activity with the International Physical Activity Questionnaire which assessed metabolic equivalent of task (METS) minutes per week. Minutes in walking time per week were assessed with an accelerometer. Data were descriptively analyzed for difference changes in scores from baseline to 6 months post intervention.
Results: Data were analyzed for 81 participants randomized to cooling and placebo groups (VLUs n = 26/29) and DFU (n = 12/16). Slight reductions in VLU pain severity (-0.5, -0.2) and interference (-0.4, -0.5) and minimal reductions in DFU pain severity (0, -0.1) and interference (0.4/0.1) were noted; however, pain scores were low (mean 4, 0 – 10 with ten worst pain possible) in both groups. For physical activity, the METS values showed low physical activity in both groups at baseline with slight improvements noted in VLU cooling and placebo groups (73/799) and DFU (1921/225) respectively. Walking time for the VLU groups improved by 1420/2523 minutes; the DFU groups improved 135/157 minutes respectively. Findings for outcomes were not statistically significant within or between ulcer groups (all P values > .05).
Conclusion: Application of the cooling pack compared to placebo was minimally efficacious on reducing post healing pain and improving function.

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Ostomy-Quality

OA03

Surgical Nurses' perception of their knowledge, skills and confidence in providing ostomy education to adult post-op ostomy patients.

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Topic: Surgical Nurses' perception of their knowledge, skills, and confidence in providing ostomy education to adult post-op ostomy patients.
Purpose/objective: To improve the knowledge and skills of bedside nurses' delivery of ostomy care through an ostomy educational program. In addition, the nurses' self-perception of their confidence level in the knowledge of ostomy care and patient teaching were evaluated.
Process:. The acute care WOC nurses developed an ostomy care educational program. This educational program was used as the intervention to provide knowledge and skills to three surgical unit RNs (N=117). A demographic survey tool along with *The Survey on Ostomy Care Questionnaire,* a validated tool, was sent to the RNs prior to the educational intervention to assess the general knowledge and "self-perceived" confidence level and skill-set when providing ostomy care. The WOC nurses provided the in-class teaching. Upon completion of the educational intervention, a post intervention survey was sent to all participants. The post-post intervention survey scheduled to send 6 months after the intervention was sent 17 months later due to Covid-19 pandemic.
Outcomes: Out of 117 RNs participated in the educational intervention, 59 responded to the immediate post survey. There was a 19% increase in knowledge and skills scores. There was an increase of 24% in knowledge and skills score between the pre and post-post educational intervention in ostomy care (N=42). The self-perceived competence and patient-teaching score was increased from pre educational intervention to post-post intervention by 17%. Qualitative data collected from the participants indicated an increase in self-confidence in providing ostomy care and related teaching to post-op ostomy inpatients. These findings suggest that the increase in knowledge and confidence were retained by the participants and became a culture of practice.

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Wound-Symptom Science

OA04

Subepidermal Moisture Measures and Their Relationship to Early Identification of Pressure Injuries in Both Dark and Light Skin Tones in The Acute Care Setting

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Pressure injuries are a serious health problem worldwide and their development remains a significant health care problem especially for at risk patients. Pressure injury (PI) prevention specific to people with dark skin tones is vitally important and significant to nursing practice because of the difficulty to detect early signs of PI in dark skin. This study explored the relationship between subepidermal moisture (SEM) and visual skin assessment as methods to detect pressure damage early in people with light and dark skin tones.
This study aimed to examine the effectiveness of SEM to detect early signs of pressure injuries in the acute care hospitalized patients with dark and light skin tones.
This study was a non-experimental, repeated measures, descriptive design exploring SEM and its relationship to early identification of PI in people with light and dark skin tones. Demographic, SEM measures, visual skin assessment, PI risk assessment and if developed, PI characteristics were collected within 24 hours admission daily for a minimum of three days, maximum 6 days at six anatomical locations. Descriptive statistics were used to describe the sample understudy and parametric statistics to ascertain relationships.
22 participants (mean age= 66.68 years; SD=13.91) developed a PI. Braden PI risk mean score for participants with PI was (11.64) indicating high risk. Sixty-eight percent of participants that developed a PI were in the high risk to very high-risk category as measured by the Braden PI Risk Assessment Scale on day of PI discovery. The mean SEM values varied in all anatomical locations with the two anatomical locations highest at the sacrum (M=403, SD=90.34) and above the sacrum (M=411, SD=74.8) but no clinical or statistical significance was found.
Further research is needed to define threshold SEM values for the acute care hospitalized population.

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Wound-Clinical Care Innovations

OA05

A pragmatic randomized controlled clinical study to evaluate the use of silicone dressings for the treatment of skin tears

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Introduction: One of the most common types of skin breakdown in aging populations is skin tears. The International Skin Tear Advisory Panel (ISTAP) advocates for special attention to be paid to dressing selection related to skin tear management. It is paramount that dressings protect the fragile nature of the skin associated with those who at heightened risk for skin tear development.
Purpose: To compare the effectiveness of soft silicone dressings (a contact layer and/or foam) for the healing of skin tears with local practices that do not include soft silicone dressings.
Methodology: The study was a pragmatic randomised controlled prospective study. One hundred and twenty-six individuals from two long-term care facilities in Ontario Canada who presented with skin tears were randomized into the treatment group using either soft silicone dressings (a contact layer and/or foam) or the control group using non-adhesive dressings.
Results: The current study demonstrated that 96.9% (n=63) of skin tears in the treatment group healed over a three-week period compared to 34.4% (n=21) in the control group. The proportion of wound healing experienced at week two was 89.2% (n=58) in the treatment group compared to 27.9% (n=17) in the control group. There was a significantly greater reduction in wound surface area relative to baseline in the treatment group (2.9 cm2) compared to the control group (0.6 cm2) ($X^{2=}$21.792 p<0.0001) at week one. Survival analysis data supported that skin tears healed 50% faster in the treatment group (11days) compared to the control group (22 days) ($X^{2=}$ 59.677 p<0.0001).
Conclusion: Results of this study suggest the use of silicone dressings support wound healing and aid in wound closure within the expected healing trajectory, with faster complete wound closure and mean healing times compared to non-silicone dressing for the treatment of STs.

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OA06

Incidence and Risk Factors for Medical Device-Related Pressure Injury in Intensive Care Unit Unstable Patients: A Prospective Cohort Study

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PURPOSE: The purpose of this study was to determine the incidence and risk factors for medical device-related pressure injury (MDRPI).
DESIGN: Prospective cohort study.
SUBJECTS AND SETTING: The study involved 77 participants followed daily until discharge, death, transfer, or lesion development. The cohort occurred during 66 consecutive days, from January to March 2020, in an intensive care unit (ICU) with 40 beds in a large hospital in a municipality in the state of Minas Gerais, Brazil.
METHODS: Sociodemographic and clinical data, pressure injure (PI) risk using the Braden scale, and head-to-toe skin inspection were assessed. All patients had a III or IV classification by the Therapeutic Intervention Scoring System-28 (TISS-28). The incidence rate and survival rate were calculated by the Kaplan–Meier method and Cox regression model.
RESULTS: The incidence of MDRPI was 63.6%. There was a statistically significant association between the presence of MDRPI and level of consciousness ($p = 0.000$). Regarding the risk factors and the development of the lesions, the presence of infection ($p = 0.007$) and edema ($p = 0.001$) were configured as significant conditions with a higher risk of developing MDRPIs. There was an association for the development of MDRPIs in enteric and/or gastric probes ($p = 0.001$), a nasal cannula for oxygen therapy ($p = 0.034$) and tube holders for securing ventilatory devices ($p = 0.013$).
CONCLUSIONS: The incidence rate found was higher than in other studies. The associated risk factors were the use of the enteric or gastric tube, nasal cannula, tube holders, having an infection, edema, and stuporous/comatose level of consciousness.

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OA07

Digitizing Wound Care: How Data-Driven Wound Management Transformed Our Practice Forever

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Topic
The lack of standardized and consistent wound data is a significant barrier to evidence-based decision making, impacting care plans and outcomes[1]. A UK-based healthcare provider responsible for treating thousands of patients with chronic wounds faced several challenges:

1. Inability to determine the efficacy of interventions and outcomes at both front-line clinical and strategic levels due to variability in recording methods within the EPR system, leading to a lack of robust data[2]
2. Inability to consistently track the progress of an individual wound due to the use of non-standardized techniques for wound measurement, giving way to high levels of inter/intra observer error[3]
3. Capacity and demand challenges, resulting in individual patients being seen by multiple clinicians, hindering continuity of care[4]

Purpose
The provider opted to deploy a scalable, smartphone-based solution allowing clinicians to precisely measure, document and track wounds over time, and use that data to optimize care plans and enhance wound management processes.

Process
Over 200 multidisciplinary staff were trained and designated clinicians acted as "champions" to help lead the solution's implementation and aid with clinical buy-in.

Outcomes
16000+ wound assessments have been recorded resulting in:

1. Adoption of data-driven wound care. Clinicians are alerted when wound variables indicate deterioration, prompting an earlier review of the care plan
2. A compelling visual record displaying the wound's progress allows clinicians to easily track progress, which increases patient engagement and adherence to care plans.
3. Senior clinicians and managers use bespoke dashboards for a bird's-eye view of wounds, providing the ability to identify organizational trends (e.g. by wound aetiology and healing rate)
4. Optimized skill-mixing, with junior staff assessing wounds under the remote, real-time guidance of expert clinicians. This allows for enhanced collaboration among staff members and the upskilling of junior staff, while ensuring continuity of care

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OA08

EVALUATION OF THE MICROBIAL POPULATION AND TREATMENT WITH PHOTODYNAMIC THERAPY IN FEET ULCERS OF PEOPLE WITH DIABETES

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Statement of the Clinical Problem - Microorganisms colonization in diabetic foot ulcers (DFUs) can lead to poor healing outcomes.1 Identifying the microorganisms helps in choosing the right therapy. Photodynamic therapy can reduce microorganisms in ulcers without inducing microbial resistance.2 **Significance to Practice-** The standard of care includes cleansing, debridement, dressings, and circulation management. However, it has not been enough to

promote healing in a satisfactory time.3 **Proposed Solution -** The presence of microbial organisms in foot ulcers and the efficacy of photodynamic therapy were evaluated in 3 men and 1 woman (45 to 59 years old) who had DFU for over eight months. To assess the presence of microorganisms in the wounds, samples were collected in duplicate with a sterile swab. In the laboratory, they were seeded on blood agar and incubated for 24 hours at 35ºC. For presumptive identification, Gram staining, catalase test and chromogenic culture medium ChromID-CPS® (BioMérieux®) were performed. Photodynamic therapy treatment (9J/cm2 of LASER +0.01% methylene blue) was performed once a week for five weeks to reduce microbial load. For primary dressing of the wound, calcium alginate was used to control exudate. **Outcomes -** Three Gram-negative bacilli and one Gram positive cocci were identified. In the presumptive analysis with the chromogenic culture medium, *Klebsiella pneumoniae* (n=2), *Pseudomonas aeruginosa* (n=1), and *Staphylococcus* sp. (n=1). After 40 days of initiating the photodynamic therapy two patients had their wound completely healed and two had a significant reduction in the size of the wound, in addition to improvement in gait, local pain and odor. **Conclusion:** Gram positive and negative bacteria can be found colonizing diabetic foot ulcers and preventing from achieving the desired outcomes. Photodynamic therapy has the potential for eliminating the colonization, foul odor, pain and hence improves quality of life.

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Professional Practice-Clinical Care Innovations

OA09

Reducing Diabetic Foot Ulcer Size in the Ambulatory Setting

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Topic: Diabetic foot wounds are a major population health concern. They are costly and disabling, affecting 6.3% of diabetics globally and cost between $9 and $13 billion annually. Six percent of diabetic wounds will require hospitalization and at least 15% will result in amputation. In 2019, 10% of initial wound center visits were diabetic foot ulcers and healing outcomes varied by provider. Implementing a diabetic foot ulcer guideline, our team impacted healing by reducing diabetic wound size 50% in four weeks for non-palliative diabetics in 2020 and 2021.

Purpose: This improvement project was designed to minimize practice variance and reduce diabetic foot ulcer size by guiding clinicians in evidence-based treatment strategies, standardizing patient education and increasing patient access to offloading devices.

Objectives: To align acute and ambulatory changes in practice and behavior, steps included:

1. Retrospective chart reviews for new diabetic outpatients June 2018-July 2019.
2. Literature review and gap/opportunity analysis.

3. Develop, educate and implement a diabetic foot ulcer guideline collaborating with nursing, surgery, podiatry and medicine.
4. Partner with hospital retail pharmacy to offer patients infrared thermometers and knee walkers.
5. Develop and standardize patient education and diabetic wound assessment in EHR.
6. Develop a database and educate staff.
7. Review findings, update and engage team, evaluate practice and modify as needed.
8. Review at-risk diabetic inpatients within the WOC team weekly.

Outcomes: Diabetic foot ulcer treatment is complex and costly. Retrospective chart reviews revealed that treatment modalities, patient adherence and provider preferences seemed to impact healing outcomes in 2019. Creating a guideline to steer the interventions for diabetic foot ulcers and collaborating with the inpatient WOC nurses, we reduced diabetic foot ulcer size 50% in four weeks from initial visit for at least 43% of outpatient diabetic patients in 2020 and at least 57% in 2021.

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Professional Practice-Clinical Care Innovations

OA10

Physician residents shadowing a Certified Wound, Ostomy, Continence Nurse to develop interprofessional competencies: A quality improvement project

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ABSTRACT

Topic: Wound care costs have skyrocketed to $96.8 billion annually, yet physician training has not kept abreast of the increased care needed for wounds. Certified Wound, Ostomy, and Continence Nurses (CWOCNs) have an arsenal of knowledge about dressings, biological tissue replacements, cell-based treatment options, positioning, and psychosocial support available for wound management; however medical education does not adequately instruct physician providers on wound care training. Interprofessional collaborative practice (IPC), based on the tenets of interprofessional education, offers an opportunity to enhance wound care management and improved patient outcomes via interdisciplinary collaboration.

Purpose: This aim of this quality improvement (QI) project was to assess a shadowing experience with a CWOCN on the four ICP domains: interprofessional communication, role awareness and responsibilities, teams and teamwork, and values and ethics for interprofessional practice.
Process: Forty-nine physician residents in Family and Internal Medicine from a Level 1 trauma center in Midwest USA each spent four sessions totaling 16 hours shadowing a CWOCN and completed the Interprofessional Education Collaborative Competency Self-Assessment Tool (IPESAT) instrument pre- and post-shadowing that measured the four IPC domains. Paired t tests were performed to determine differences in IPESAT scores before and after the shadowing experience.
Outcomes: Residents demonstrated significant improvement in their overall knowledge of IPC (P = .000) as well as knowledge within each of the four domains (P = .000). After the shadowing experience the overall ranking improved by 7.5%; the greatest gain (10.8%) occurred in the teamwork domain. We found that even a comparatively brief shadowing experience with a CWOCN improved knowledge in IPC competencies. The shadowing experience is now permanently part of the Internal Medicine Residency program, and other residency programs have increased their requests to shadow with the CWOCN.

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Continence-Quality

OA11

Diaper Dermatitis Algorithm Quality Improvement Initiative to Decrease Incidence of and Severity of Diaper Dermatitis using a Reliable and Valid Scoring Tool in the Neonatal Intensive Care Unit (NICU)

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Background: Neonatal skin is highly fragile especially in the critically ill. Many factors affect the skin, specifically the diaper region, causing dermatitis skin breakdown that can lead to open, bleeding ulcers. Though direct diaper dermatitis etiology is unknown, many believe it can be prevented with optimal skin care. The prevention comes from evidence-based care standards using tools and algorithms that promote optimal skin care and positive patient outcomes.
Local problem: The Neonatal intensive care unit (NICU) has a high incidence of severe diaper dermatitis cases.
Methods: SQUIRE 2.0 Quality Improvement guidelines were used for the manuscript framework. Using a quality improvement method, a diaper dermatitis care algorithm was created and embedded in a reliable and valid scoring tool to guide NICU staff. Pre and post data diaper dermatitis scores were collected prior to and three months after implementation. Using convenience samples during the National Database for Nurse Quality Indicators (NDNQI)

prevalence days, baseline comparison of scores was evaluated using The Levene's Test for Equality of Variances.
Interventions: In a 98-bed, Level IV NICU, after staff education provided, the care algorithm was implemented with references available at the bedside and electronically.
Results: Pre-data reflected few severe diaper dermatitis scores. Post-data collected was analyzed using Levene's Test for Equality of Variances and compared to the collected pre-data. The end results indicated $t(162) = .746$, $p = .368$, $d = .098$; Presenting no statistical significance with the algorithm. Extraneous variable with water-based baby wipes discovered.
Conclusions: A diaper dermatitis care algorithm did not reflect statistical significance; However, the algorithm did impact clinical practice through increased autonomy and empowerment of nursing staff to initiate treatment using a standardized and evidence-based approach. After the completion of the QI project, NICU leadership performed a quality chart audit; they reportedly found 100% compliance with instrument use.

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Foot & Nail-Quality

OA12

Foot Care Education Retention among Diabetic Ulcer Patients in the Outpatient Setting

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Topic
Implementation strategies to promote diabetic foot care education retention
Purpose
Diabetic patients are at risk of injury and amputation related to neuropathy and impaired healing potential. Foot care education specific to the needs of a diabetic patient is one intervention available to prevent new or further breakdown (Makiling & Smart, 2020). Strategies to improve education retention provide opportunity to positively influence diabetes management and self-care (Kim & Han, 2020).
Methodology
Standardized diabetic foot care education with retention assessment on subsequent visitation was conducted for all new patients with diabetic foot ulcers treated at a suburban hospital outpatient wound healing center. Monthly data was analyzed via retrospective chart review and reported to the clinical team resulting in initiation of nurses co-reading the standardized education pamphlet with patients. Aggregate data is being utilized to inform ongoing quality improvement of diabetic foot care education methodologies.
Objectives
This project aimed to identify patient retention capacity for standardized diabetic foot care education, assess and intervene in instances of poor education recall, and evaluate the efficacy of current education materials and educational strategies.

Outcomes
Of 74 DFU patients treated for at least two visits between August 2019 and April 2021, 64(86.5%) were able to recall at least two teaching points upon follow-up visit retention assessment. Two-point retention ability increased from an average of 50% to 93.5% following implementation of nurse co-reading of education materials. Analysis of specific topic retention identified that the most frequently recalled teaching points were to check feet daily(54.7%), to not trim your own nails(45.3%), and to not ambulate barefoot(40.6%). Alternate educational intervention strategies are under development to promote retention of teaching points related to blood glucose control(1.6%), weight management(3.1%), skin protection techniques(1.6%), and first aid strategies(4.7%) in relation to diabetic foot care as these topics were poorly retained upon follow-up assessment.

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Ostomy-Wellness

OA13

Self-care Skills and Influencing factors Among Patients undergoing Radical Cystectomy and Ileal Conduit: A Cross-sectional Survey of Chinese bladder Cancer Patients

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Purpose: This descriptive, cross-sectional study aimed to describe self-care skills among patients with radical cystectomy and ileal conduit surgery and identify related impact factors.
Methods: We recruited patients who visited nurse-led ostomy clinics from October 2020 to August 2021 in a tertiary hospital in North China. We observed the procedure of changing the pouching system to record urostomy self-care skills and examined stomal and peristomal skin to identify related complications. Linear regression analysis was used to analyze related factors that affected patients' self-care skills.
Results: A total of 145 patients were recruited in nurse-led ostomy clinics. Of the patients, 61 (42.1%) had stomal complications, and 27 (18.6%) presented peristomal complications. The most prevalent stomal complication was parastomal hernia, and the diagnosis was determined by clinical examination with related symptoms. Patients with parastomal hernia had heavy lifting ($p<0.001$) and longer overall operative times ($p=0.001$). The mean ± standard deviation (SD) for the urostomy education scale scores was 12.80±8.41, indicating a moderate level of patient self-care skills related to changing a urostomy pouching system. The linear regression analysis results indicated that participants themselves had significantly higher self-care skills scores than spouses ($p<0.05$), and there was no significant difference among children, the other and spouses. The longer the postoperative time was, the higher the self-care skills score, but the difference was not significant. In terms of marital status, the score was lower with a spouse than without a spouse, but there was no significant difference.

Conclusions: The incidence of stomal and peristomal complications was moderate; in particular, the longer the postoperative time was, the higher the incidence of peristomal hernia. The self-care skills of urostomy were low to moderate levels, particularly when patients could take care of themselves, and their self-care skills of urostomy were better than those of other caregivers.

Kristensen, Susanne Ammitzbøll; Laustsen, Sussie; Kiesbye, Berit; Jensen, Bente Thoft The Urostomy Education Scale, Journal of Wound, Ostomy and Continence Nursing: November/December 2013 - Volume 40 - Issue 6 - p 611-617

OA14

The Spiritual Activities in Stoma Care

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Introduction. Shalat (ritual praying) is a spiritual activity in Muslim ostomates. It has a personality and qualities that we could understand and relate to, but we cannot expect to relate to God, much bigger and more incredible, beyond what we can understand in the natural everyday world. The problems for the ostomates are unable to control feces or urine, and therefore would nullify the condition for doing activities ritually as a Muslim. Pathetic condition, the patient having stoma may be regarded as "an unclean" person. Caring holistically for a patient means, as a stoma nurse needs to be more aware of the spiritual and cultural issues, which may affect them.
Purpose. This study will analyze the spiritual well-being of Muslim ostomate to achieve a health-related quality of life. This study research design ran with the quantitative research method through a descriptive approach and a cross-sectional sample survey design.
Methodology. One hundred Muslim ostomates were invited to participate in this study as respondents. The study research is located in Indonesia, and data was collected through an online questionnaire using survey monkey. Data analysis was performed using PLS-SEM and running by Smart-PLS 3.0 version.
Results. The research finding that Muslim Ostomate needs adaptation for their condition preparing for ritual praying related to spiritual well-being is supported (0.008); the stoma support group could help patient and family to achieve the new adaptation is supported (0.015), and the information about Fatwa for ostomate can assist stoma patients, and their families are supported (0.000) that improving patient quality of life.
Conclusion. The study highlighted that Moslem fatwa is part of stoma nurse counseling. This research will address this issue about prayer activities based on FATWA Muslim, a ruling on Islamic law given by a recognized authority.
Keywords: Moslem Fatwa; spiritual well-being; counseling

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Health-Related Quality of Life Among Long-Term Rectal Cancer Survivors With an Ostomy: Manifestations by Sex

Robert S. Krouse, Lisa J. Herrinton, Marcia Grant, Christopher S. Wendel, Sylvan B. Green, M. Jane Mohler, Carol M. Baldwin, Carmit K. McMullen, Susan M. Rawl, Eric Matayoshi, Stephen Joel Coons, and Mark C. Hornbrook
Journal of Clinical Oncology 2009 27:28, 4664-4670

OA15

Say what you see – P.L.A.C.E.D a tool to increase the quality and accuracy in peristomal skin documentation

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It seems so basic to say "Say what you see", but when it comes to describing peristomal skin appearance, what words do we as Stoma Care Nurses you use? 'Broken'; 'red', 'excoriated' or 'sore'? All these words are potentially open to misinterpretation and do not accurately describe or reflect what the skin around the stoma actually looks like.
As Nurse Specialists in Stoma Care (SCN) we instinctively consider and identify the cause of the skin condition and treatment option, missing out capturing and recording a detailed explanation of the visual examination of the skin appearance. An accurate description and record of the skin to justify our professional judgement and clinical decision making is a key element to the holistic assessment. This is also important to bench mark current status and enable progress and outcomes to be monitored.
We are all aware that precise and accurate nursing documentation is a legal and professional requirement which is essential in maintaining continuity and informing ongoing care and treatment.
In response to raising this concern, a group of experienced, specialist SCN's, in collaboration with the Association of Stoma Care Nurses (ASCN UK), Tissue Viability nurses and a Consultant Dermatologist reviewed the terminology used to describe peristomal skin appearance. This presentation will share a glossary of skin terminology which has been gained and ratified through a consensus of expert opinion and an easy to use tool (P.L.A.C.E.D) which will help prompt Nurse Specialists to complete a detailed description of the skin condition. The ultimate aim being to raise the importance of documenting the visual appearance of peristomal skin appearance and promote consistency, accuracy and quality of our specialist professional documentation.

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Ostomy-Quality

OA16

Prospective measurement of the trajectory of adjustment outcomes among new stoma patients up to nine months after surgery

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Background:
There is insufficient prospectively collected evidence about adjustment to a stoma over time (Indrebø, Natvig, & Andersen, 2016; Näsvall et al., 2017)
Aim:
To describe a 9 month adjustment trajectory post stoma surgery, among a representative sample of new Australian ostomates and explore the trajectory against personal and clinical characteristics.
Method:
A questionnaire was offered to consecutive new stoma patients at five points of measurement from at-discharge to nine months post-surgery. The instrument comprised:

1. the Ostomy Adjustment Inventory (OAI-23) (Simmons, Smith, & Maekawa, 2009), which reduces to four domains: Acceptance, Anxious Preoccupation, Social Engagement and Anger.
2. An inventory of clinical and personal demographics.

Repeated measures analyses were conducted to explore the adjustment trajectory. Cross sectional analyses by patient descriptor were conducted and multivariate analyses were conducted to refine predictive models of adjustment at 9 months.
Results
N=735 participants received a stoma, and n=230 had remained in the study at 9 months follow up. At nine months, anger was on an improving trend ($P<0.05$) and anxious preoccupation was worsening ($P<0001$). Acceptance and social engagement were flat. Multivariate analysis confirmed predictive importance for younger age as a predictor of better adjustment on all domains, and cultural/linguistic diversity status which predicted poorer adjustment on 3 domains. Female gender and self-report of engagement with other ostomates during the follow-up period positively predicted social engagement. Elective surgery was predictive of better anger and acceptance and incontinence at time of surgery predicted positive change on anger. Many participants did not return to intimate relationships following surgery. Only one third of participants had contact with other people with a stoma.
Conclusion
An important prospective analysis which is largely missing from the literature is contributed. Service development ramifications with regards psychological supports for this group of patients appear evident.

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Case Study Abstracts

CS01

Use of bi-layered skin substitute for pyoderma gangrenosum in the outpatient setting

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Pyoderma gangrenosum (PG) is an ulcerative condition believed to be autoimmune in nature. It is often associated with underlying conditions such as rheumatoid arthritis and inflammatory bowel disease. PG ulcers are painful and slow to heal. Patients who present with PG are often initially misdiagnosed. Immunosuppressive therapy is frequently used to address underlying

immune and inflammatory conditions. Patients who undergo immunosuppressive therapy continue to have slow healing wounds with only 50% achieving remission after 6 months.[1] There is no standardized treatment, however a multidisciplinary approach is generally used with referrals to others specialists according to patient comorbidities and wound characteristics.
PG wounds are difficult to treat. Debridement is generally avoided. Topical treatments and wound dressings are chosen based on wound characteristics and patient tolerance. The slow progress and difficulty healing cause frustration for both the wound specialist and the patient. Cultures and biopsy are used to help diagnose and treat PG.
Skin substitutes are used for chronic venous stasis ulcers and diabetic ulcers that have been unresponsive to more conventional treatment. Research is limited, however, there is evidence that surgical split thickness skin grafts may be effective for PG in conjunction with other treatment modalities.[2] This case study examines the use of a bi-layered skin substitute[3] in a case of PG along with immunosuppressive therapy and a multidisciplinary approach.
A 34 year old female with no significant medical history presented in the clinic with a lower extremity wound. The patient was diagnosed with PG and was referred to a dermatologist and a rheumatologist for evaluation and immunosuppressive therapy. Even with sufficient immunosuppressive therapy, the patient's wound was slow to heal and painful. The use of a bi-layered skin substitute in the outpatient setting allowed for accelerated healing and reduction of pain.

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CS02

Collaborative Treatment of Peristomal Pyoderma Gangrenosum – A Report of 3 Case Studies

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Clinical Problem
To present case reviews of successful collaborative multidisciplinary management of peristomal pyoderma gangrenosum (PPG).
Background
Peristomal pyoderma gangrenosum is an idiopathic, inflammatory ulcerative condition of the peristomal skin. It is characterized by painful recurrent ulcerations and is often associated with the presence of systemic autoimmune disease. PPG is commonly caused by trauma, fecal exposure, mechanical stripping and surgical excision. The most common presentation is an inflammatory papule or pustule that progresses to a painful full thickness ulcer with a violaceous undermined border and a purulent base. It is often diagnosed by exclusion. Early recognition is vital as ulcers tend to rapidly progress and fail to heal with usual treatment.
Clinical Approach
Three case studies demonstrate the progression from early identification and implementation of treatment as an essential component to promoting wound healing in patients with PPG. Collaboration with Gastroenterology, Dermatology, Colon and Rectal Surgery and WOC Nurse played an important role in success toward healing. Advanced wound care and unique ostomy solutions were utilized to not only treat the PPG but to allow successful management outside the hospital and clinic setting. Treatment included the use of topical and systemic steroids, anti-microbial advanced wound care products and biologic therapy.
Conclusion

Early diagnosis of PPG is essential to avoid further deterioration of ulceration. Aggressive treatment with oral steroids, biologics and topical wound care in all cases resulted in near complete resolution of PPG ulcerations. Close weekly monitoring by WOC Nurse in collaboration with Gastroenterology and Dermatology colleagues was key to successful management.

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CS03

A Novel Transforming Powder Dressing for Healing Chronic Wounds of Multiple Wound Etiologies

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Chronic wound care is challenging. What alternatives to Standard of Care (SOC) are available when wound therapy fails to heal a wound? One challenge relates to decisions regarding optimal topical therapy. In the cases presented, a primary topical therapy, which included a novel transforming powder dressing (TPD), was utilized with the primary goal of optimizing and assessing the rate of wound healing which failed SOC treatment. The wounds in all cases were stalled, showed no progress, or had deteriorated with prior SOC therapy. Past management was based on wound etiology.

Case Overview:

1. **Burn-Wound**: SOC included Silver Sulfadiazine 1% cream and a non-adherent dressing. Wounds worsened after SOC treatment. Present for 60 days prior to start of TPD.
2. **Diabetic/neuropathic foot ulcer**: SOC included contact cast and foam dressing. Multiple wounds on the plantar foot were present for >12 months during the SOC period.
3. **Trauma related wound**: SOC treatment included mupirocin calcium ointment and medical grade honey gel. Wound progress stalled and did not progress after 45 days of SOC treatment.

The same basic principles for the treatment of each wound (moist wound healing, edema control, offloading devices) was continued, in conjunction with a primary dressing, which was replaced with TPD in all cases. The only factor which was modified in the treatment of each case was conversion of the primary dressing to TPD. The patients' wounds in each of the three cases resolved to complete healing with the use of TPD. Average days to heal for all wounds was 63 days.

In each of the three cases presented, there was a failure of traditional SOC wound care to facilitate wound healing. The use of TPD as a universal primary dressing on non-healing wounds of different etiologies significantly improved healing times and brought each of the wounds to complete closure.

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CS04

Minimize acute radiation dermatitis - Consider film application to achieve positive outcomes for breast cancer patients: A case series

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Statement of the Clinical Problem
In the United States, Canada, Europe and Australia, 50% of patients diagnosed with cancer will receive radiation therapy (RT) and 95% of them will experience some degree of skin reaction. Nearly all women who receive RT for breast cancer experience some degree of radiation dermatitis (RD)[1].
Past Management
In 2014 the use of a barrier film during radiotherapy was explored and patients reported reduced symptoms from the skin with the film in place.[2] Severe RD is distressing, may have long term effects and might lead to treatment interruptions which may increase the risk of recurrence. More recent research (2020) at a hospital in Canada, concluded that the film completely prevented grade 3 RD and their rates of moist desquamation and grade 2 RD were lower with the film versus studies using aqueous cream.[3]
Current Clinical approach
This case series occurred in a trauma center located on the Westcoast of Canada, within 24 hours of RT commencement, a silicone-based film was applied to the breast area on 14 women ages 29-69. RT varied from 15-25 cycles, including one case of 5 and one of 10 treatments. Typically the film was left in place up to two weeks following the treatment regimen.
Patient Outcomes The outcome for the women was positive with 12 out of 14 women avoiding skin breakdown. One case was withdrawn 24 hours post application and the other case included repeated removal of film during frequent exercise regimen.
Conclusion: The benefits of utilizing a film, unlike other semipermeable dressings, stayed on for weeks and the transparency allowed skin reaction to be assessed without removing the film. The positive results from this small case series challenges further exploration to the utilization of a film for women with breast cancer receiving radiation treatment.

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2. Herst PM, Bennett NC, Sutherland AE, Peszynski RI, Paterson DB, Jasperse ML. Prophylactic use of Mepitel Film prevent radiation-induce moist desquamation in an intra-patient randomised controlled clinical trial of 78 breast cancer patients. *Radiother Oncol.* 2014;110;137-143.
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CS05

Enteroatmospheric Fistula Isolation with NPWT in a Complicated Surgical Abdomen to Promote Wound Healing and Improved Quality of Life. A Case Study.

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Statement of Clinic Problem
Enteroatmospheric fistula (EAF) is an aberrant connection between the gastrointestinal tract and the skin and/or wound. EAF management can present challenges to the wound, ostomy and continence (WOC) nurse. Patient's suffering from an EAF are known to have pain and experience social isolation that negatively impacts their quality of life. The purpose of this case study is to demonstrate how a WOC nurse can positively impact our patient's quality of life and wound healing with creative and unique approaches to fistula and wound management.
Past Management
32 year old female with remote history of colorectal cancer, underwent myomectomy complicated by enterotomy requiring small bowel resection, sepsis, wound dehiscence and EAF formation. Initial management included moistened gauze with secondary dressing until attempts were made to isolate the fistula. Unsuccessful attempts were made to isolate the EAF effluent with a commercial fistula isolation device.
Current Clinical Approach
A custom fistula isolation device was created by the WOC nurse using supplies available on the unit. Supplies included white negative pressure wound therapy (NPWT) foam, incentive spirometry (IS) tubing and an ostomy barrier ring. The fistula isolation device was placed into the wound bed and effectively able to isolate the EAF from the surrounding wound. The wound was then managed with NPWT with standard black foam and secured with NPWT transparent dressing.
Patient Outcomes
WOC nurse creativity and unique approach in creating the fistula isolation device, 36-48 hour wear time was achieved using NPWT and the fistula isolation device while allowing for improved patient mobility.
Conclusion
The wound demonstrated significant granulation and healing in a month's time, allowing the patient to return home with a simple management plan, greatly improving the patient's quality of life and feelings of social isolation.

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CS06

Innovative Custom-Modified High-Output Pouching System to Manage High-Output Ileostomy and Fistula Drainage

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Background and Problem
When high output ostomy or fistulas present in acute care settings, clinicians tend to manage them with high-output pouches. Most high output pouches are equipped with a standard size outlet port to connect to a bedside drainage bag. Facilities may have limited high-output pouching selections. When high-output effluent has mixed consistency, such as thick stool or undigested pieces of food, the pouch outlet port may clog causing difficulty with emptying. This leads to rapid pouch overfilling, more constant pouch milking, and constant leakage

contributing to peristomal skin breakdown. Both the patient and clinician become frustrated. Patients may have an increased length of stay, require short- or long-term care placement and experience repeat admissions.

Purpose

To create an innovative, custom-modified, high-output pouching system to accommodate emptying mixed high-volume liquid with mixed consistency output easily and to prevent leakage for maintenance of skin integrity.

Method

The technique created a larger outlet port drain by attaching a drainage pouch to a larger drainage tube with rubber bands and waterproof tape. Utilizing a suction kit with multiple vents on the lid as the end collection container allows the system to maintain a sealed unit for odor and gas management. The materials are easily obtained and readily available on unit supply closets.

Case Study One and Two

67 y/o male, ileostomy output was 1800-4500 ml in 24hs in acute care. The system was able to maintain a 4-5days wear time along with no clogging of outlet port.

64 y/o male, fistula output varied from 1000-3800 ml in 24hr due to his dialysis status. The modified pouching system was applied to his fistula. He was discharged home with utilizing this system.

Conclusion

Tailoring this creative technique for pouch modification aides in improved patient care, enhances comfort and reduces care giver and patient frustration.

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CS07

De-functioning Transverse Colostomy in special clinical scenarios-A case series

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Statement of the Clinical Problem

Faecal contamination of perineal wounds increases morbidity, mortality and challenges on nursing care. De-functioning transverse colostomies (TC) address these issues, presenting unique challenges to the stoma therapist.

Past Management

Conservative management without a stoma increases burden on nursing care and specialized management.

Current Clinical Approach

Although TCs are less favored, they were created in all 3 patients with a trephine incision and the stomas were managed amidst multidisciplinary care.

Patient Outcomes

Case 1

A 30-year-old female at 12 weeks of gestation presented with burns on buttocks, perineum, and lower limbs involving 40% of body surface area (BSA). She survived, although, foetus aborted after 4 weeks. Stoma was reversed after a successful skin graft.

Case 2

A 26-year-old male with suicidal burn injury (20% BSA) to back, buttocks and lower limbs underwent stoma creation. After successful recovery and skin graft, he is awaiting stoma reversal.

Case 3

A 32-year-old male had a stoma created at emergency laparotomy for road traffic accident. He had a mesenteric tear, pelvic fracture and a degloving injury to right buttock and ischiorectal fossa. He is awaiting sphincter assessment and stoma reversal.

Conclusions

Stomas prevent faecal soiling, wound infection and sepsis. Ileostomies lead to dehydration and electrolyte imbalances due to increased effluent, resulting increased morbidity and mortality especially in burns and hyperemesis in pregnancy, Access is difficult with lower abdominal stomas in pregnancy and patients with difficulty in bending forward. A TC also preserves lower abdomen skin for grafting.

Changes in colostomy size and function from initiation to maturation, during gestation and following termination of pregnancy challenged the stoma therapist.

All patients needed nutritional, psychological, general and plastic surgical management. The pregnant patient had regular obstetric input needing the stoma therapist to liaise and adapt according to the changing demands.

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CS08

Putting Your Sights on Stoma Site Marking!

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Statement of the Clinical Problem/Challenge: Preoperative stoma site marking is performed inconsistently, or not at all, for patients undergoing planned fecal and urinary diversions. Clinicians who are involved in stoma site marking could improve stoma site selection by referring to the principles of stoma site selection published in the literature and/or the collaborate position statement.

Significance to Practice Including Past Management: Selection of a stoma site has implications for a patient's ability to manage their ostomy, development of complications and their quality of life while living with an ostomy. An optimal stoma placement increases wear time of the pouching system, decreases the use of pouching accessories, and increases the independence of the individual. The United Ostomy Association of America (UOAA) supports the practice of stoma site marking for individuals who are either scheduled or have the potential to have a stoma created.

Solution/Clinical Treatment Approach: It is known that patients who undergo preoperative stoma site marking by a clinician who is competent in the procedure, and follows the steps outlined in the collaborative position statement developed by the Wound, Ostomy, and Continence Nurses Society (WOCN), American Society of Colon and Rectal Surgeons (ASCRS) and American Urological Association (AUA), experience less postoperative stomal and peristomal complications.

Outcomes and Conclusions: Ideal placement of the stoma is crucial to the wellbeing of individuals with newly created stomas. Consistent use of the position statement to guide preoperative stoma site selection for fecal and urinary diversions will improve stoma location and therefore decrease stomal and peristomal complications. Through the use of three case studies the authors will support that use of the collaborative position statement can result in optimal stoma site selection.

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CS09

Management of the Complex Abdominal Fistula Patient and WOC Nurse Role Resilience: A Multiple Case Series

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Statement of the Clinical Problem: Three long term high output fistula patients cared for by the WOC team at a level 1 trauma center in the NE region of the USA are presented. Each patient had an extended stay up to 250 days with challenging high output fistulas, requiring specialized pouching and wound care techniques with daily to biweekly monitoring and interventions by the WOC team.
Past Management: Past management includes an abdominal closure system, pouching, NPWT, wall suction, surgery, saddle bagging and dressings.
Current Clinical Approach: The WOC team provided complex wound, ostomy and fistula care, emotional support, advocacy and coordination of care utilizing the core attributes of the WOC nurse role (Brooke, et al, 2019). WOC nurse resilience, adaptability, (Leng, et al, 2020) commitment, ability and willingness to cope and resolve these challenges cooperatively provide a consistent approach (Farghaly & Hashish, 2021).
In addition to the intricacy of the physical care these patients required, the psychosocial issues were tantamount in daily care. This included seeing the patients at predictable times daily to decrease their anxiety and feelings that they had to "control" all care activities. Family support was limited because of pandemic restrictions and transportation issues, so the WOC nurses and bedside nurses took on this role. Coordination of care, interprofessional collaboration and being patient advocates also complemented the intense care these patients require.
Patient outcomes: WOC team consistency, POC discussion at morning WOC Nurse huddle, team member support, collaboration, documentation and communication of plans through photo documentation led to successful management and transition of care promoting positive patient outcomes.
Conclusions: These cases exemplify the true core of WOC nursing resilience, commitment, compassion, and respect for the patient.

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CS10

Resolving Deep Tissue Pressure Injuries with Low-Frequency Ultrasound Technology

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Clinical Problem: Deep tissue pressure injuries (DTPIs) in the acute setting often evolve to become extensive stage 3 or stage 4 pressure injuries. Traditional topical therapies have limited effectiveness in slowing the ischemia-related evolution process associated with deep tissue damage. Without advanced wound therapies, the anticipated DTPI evolution trajectory often involves long-term healing and symptom management.
Management: Previous management strategies for treatment of deep tissue pressure injuries (DTPIs) in the acute care setting were limited to standard offloading of site and application of protective dressings. Without further intervention, many identified DTPIs evolved to become open stage 3 or stage 4 pressure injuries. By implementing low-frequency ultrasound technology within 3 days of identification, DTPIs showed signs of resolution rather than evolution to open ulcerations.
Clinical Approach: In conjunction with standard offloading and protection of site with multilayer foam dressings, each patient received routine treatment with low-frequency ultrasound technology by Physical Therapy wound specialists, and routine management of injury by CWOCN. Prospective patients were chosen based on the initial staging of injury (DTPI), timing of injury identification, and the patient's ability to tolerate therapy.
Patient Outcomes: The included case studies demonstrate deep tissue pressure injuries (DTPIs) identified over a variety of anatomical locations which show signs of resolution, rather than evolution to a stage 3 or 4 pressure injury. By including routine low-frequency ultrasound therapy to a standard treatment regimen, DTPIs showed signs of resolution without anticipated full-thickness tissue loss.
Conclusions: The combination of early identification of deep tissue pressure injuries (DTPIs), prompt CWOCN consultation, and the immediate initiation of low-frequency ultrasound technology resulted in improved patient outcomes. Advantages include abbreviated healing times and an interruption of the expected evolution trajectory of a DTPI. This poster will provide visual demonstration of these improved outcomes.

Honaker, J. S., Forston, M. R., Davis, E. A., Wiesner, M. M., & Morgan, J. A. (2012). Effects of non contact low-frequency ultrasound on healing of suspected deep tissue injury: A retrospective analysis. *International Wound Journal*, *10*(1), 65–72. https://doi.org/10.1111/j.1742-481x.2012.00944.x
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CS11

The use of Negative Pressure Wound Therapy in complex surgical wounds of the lower extremity.

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1. Statement of the Clinical Problem
Each patient (a,b,c) had a variety of co-morbidities and wounds covering large surface areas. After initial acute injury, extensive bone or soft tissue infection/necrosis, the patients required NPWT-assisted closure and other advance modalities/procedures for limb salvage.
2. Past Management
a. Adolescent patient was seen in ED and required emergent lower extremity fasciotomies secondary to acute compartment syndrome and rhabdomyolysis.
b. The patient was referred for surgical evaluation with subacute osteomyelitis after undergoing previous multiple partial ray amputations. Excision of infected bone and soft tissue as well as application of external fixator were initially performed. Due to large soft tissue void and inability to primary close, vessel loops and staples were used in Jacob's ladder suture technique for increased soft tissue retention prior to application of NPWT.
c. The patient presented to ED with severe sepsis, ejection fraction of 20%, critical limb ischemia and distal necrosis bilaterally. Emergent I&D, removal of non-viable tissue and transmetatarsal amputation were performed for immediate infection source control. Cardiology/vascular unable to perform revascularization due to lack of distal runoff.
3. Current Clinical Approach
a. Serial debridements with multiple applications of skin substitutes and NPWT with bridging between 4-5 wound sites on the right lower extremity.
b. After removal of vessel loops, application of NPWT with ex-fix and serial debridements, and application of skin substitute.
c. Bilateral serial debridements with multiple applications of skin substitutes and NPWT with bridging between wound sites of the right foot and ankle.
4. Patient Outcomes/Conclusions
a. Complete closure in less than 3 months of advanced wound care.
b. No further amputation required with significant reduction in wound size.
c. No further amputation required with complete closure of left foot wounds and right ankle wound, epithelializing final right foot wound.

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CS12

PURPURIC SKIN LESIONS IN COVID-19 PATIENTS IN AN ACUTE CARE SETTING: REPORT OF 3 CASES

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Statement of the Clinical Problem: The hypercoagulation status seen in COVID-19 patients may be involved in microvascular occlusion resulting in stroke and venous thromboembolism. The aim of this case report is to describe the purpuric skin lesions in Covid-19 patients in an acute care community hospital. **Past Management and Current Clinical Approach:** The three patients were admitted to the intensive care unit with Covid-19 pneumonia infection.

Two were intubated and one was placed on a Bipap. None of these patients were placed in a prone position. Pressure injury prevention measures, such as prophylactic foam dressing applied on bony-prominences, and turning and reposition scheduled were implemented. **Patient Outcomes:** The purpuric skin lesions were observed in three patients, lesions were noted on buttocks, lower legs, and feet, one patient also presented with a pustular-like rash. The lesions were noticed to have a rapid onset, and some of the lesions were not located at a bony-prominence. A blister appearance was noted usually 1 week after purpuric lesion onset. One patient was obese with history of psychiatric disorder, as soon he became more alert, he was more agitated and non- compliant with the reposition schedule, the wound evolved to an unstageable pressure injury. Pressure and shearing played an important role on the poor outcome of this patient buttocks wound. We believe the original cause of this wound was microthrombosis related to Covid-19, but the worsening of the wound was related to pressure. One patient expired 10 days after appearance of the lesions. The other patient was discharged with a partial thickness wound on buttock. **Conclusion**: Some of these purpuric skin lesions may be mistaken by Deep Tissue Pressure Injury. The SAR-CoV-2 virus appears to affect the skin and may be responsible for the microvascular thrombosis and developing of the purpuric lesions in acute-care patients.

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CS13

Use of Convexity in Retracted Ostomates with Multiple Skin Folds~ The Nursing Experience of a Newbie of Enterstomal Therapist

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This newbie Enterstomal Therapist utilized the 2019 international convexity consensus guideline, and the consensus guidelines for stoma leakage management to assist three retracted ostomates with multiple skin folds to solve their frequent leakage problems. Frequent leakage leads to periostomal skin irritation and pain, increased equipment costs, and decreased quality of life.

The main caregivers of the 3 ostomates were older, and this would be their first time to learn how to apply ostomy bags. Considering the ease of operation, a one-piece ostomy bag was chosen, which can be worn around 3 days. However, a few months later, the ostomates experienced changes in body shape causing frequent leakage problems. They went back to the clinic and sought the Enterstomal Therapist’s assistance.

After assessing the stoma and abdominal changes, convexity is chosen for the soft periostomal skin. The peristomal plane is supported to flat by convexity of depth, pressure concentration base, and hardness. In addition, the waist belt is used to increase pressure and compliance of convexity to reduce leakage.

After changing to convexity, the wearing time improved from 1-2 days to one week. It is working to reduce leakage times.
Preventing leakage and prolonging the wearing time for complex ostomates is a challenge for the author as a newbie Enterstomal Therapist. The author has taken various learning opportunities and utilized international references to evaluate the ostomates various stoma care indicators. The use of convexity and related accessories to customize the solutions for the ostomates, has extended wear time and decreased the cost of ostomy equipment. It has removed the physical, psychological, and economic pressure from ostomates and their main caregivers to improve life satisfaction.

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CS14

Using High Volume Low Air Loss Support Surface as Part of a Skin Treatment Bundle for Patients with Full Thickness Sacral/Coccyx Pressure Injuries and Multiple Comorbidities.

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Background/Significance
Chronic or acute full thickness pressure injuries (PI) are painful, costly to heal, and are associated with increased complications and increased length of stay (NPIAP, 2019). Full thickness PI 's on the sacral/coccyx area are among the most difficult to heal. Friction, shear, moisture, and pressure are difficult variables to mitigate and are known factors in the development of PI (NPIAP, 2019).
Method
A high-volume low air loss (LAL)support surface was used to manage moisture at the skin/surface interface as part of a new skin treatment bundle. This support surface was chosen for increased pressure redistribution and the ability to reduce friction and shear through a high tech polyurethane top cover.
A skin treatment bundle was developed and implemented at a large upstate New York facility to address and heal full thickness PI's to lessen the personal and financial burdens. The new skin treatment bundle included: a high volume LAL support surface, repositioning every two hours while in bed and hourly when out of bed, nutritional assessment and interventions, moist wound healing, preventative foam dressings, protective barrier creams, urine and fecal diversion when appropriate, offloading heels, and an offloading chair cushion. Four patients with existing PI were chosen to trial the specialty support surface in the new bundle. All four patients had full thickness sacral/coccyx wounds.
Outcomes/Results

Incorporating the LAL support surface in the skin prevention treatment bundle allowed the existing PI's to heal and no other PI's developed during the trial.

Discussion/Conclusion

While four patients is not a large number. The trial did allow the facility to purchase/rent more LAL support surfaces as part of the new skin treatment bundle.

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CS15

Use of a Hypochlorous Acid-Preserved Cleanser for Treatment and Prevention of Skin and Wound Conditions in Extremely Pre-Mature Neonates

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Statement of Clinical Problem:

Traditional skin cleansers, such Chlorhexidine(CHG) and Povidone-iodine, have been shown to have side effects when used in the extremely premature neonate. Infections in this group can be fatal, so are a priority consideration for prevention/treatment. Consults seeking guidance on what to use on the skin of so-called micro-premies have challenged the wound care nurses to determine a safe alternative.

Past Management:

Studies on skin preparation agents in micro-premies are very limited. Due to past adverse effects with use of traditional agents, Providers are hesitant and most policies prohibit their use in this population.

Current Clinical Approach:

In collaboration with our Neonatal Providers, we have selectively implemented the use of a cleansing solution preserved with hypochlorous acid (HOCl) as a skin and wound cleanser on infants with concerning rashes or wounds.

Patient Outcomes

The hypochlorous acid-containing solution has proven to be safe and effective in promoting resolution of various skin concerns and prevention of infection, with no identified adverse effects on these smallest of patients.

Conclusions

The cleanser containing the hypochlorous acid preservative is gaining favor as a safe skin cleanser for neonates. Further studies are recommended to support broader use in this vulnerable population.

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CS16

Pilonidal Cyst: Wound Hygiene Protocol

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A pilonidal cyst is a chronic inflammatory process of the skin and subcutaneous tissue of the sacrococcygeal region (Hap, et al., 2017), with an occurrence of 26 out of 100,000 in the general population (Sadati et al., 2019). Prevalence is four times greater in males than females. Risk factors consist of limited air of the intergluteal cleft, anaerobic bacteria in the hair follicles, production of keratin-rich substance of the sweat glands, hair within the gluteal fold, and epidermal damage. Currently, there is no clear standard of care for treatment (Hap, et al., 2017).
Historic management strategies include surgical procedures ranging from simple irrigation and drainage to more complex sinusectomy and flaps (Lesalnieks, et al., 2021). Leaving the wound open for secondary closure with negative pressure wound therapy and advanced wound care products reduces the recurrence rate, but prolongs healing time (Hannan, 2021).
A conservative clinical approach was performed in a suburban hospital outpatient wound center. The wound hygiene treatment included periwound hair clipping and cleansing with chlorhexidine gluconate 4.0% solution, drying the area thoroughly using a blow dryer on cool low speed and wearing breathable undergarments. Wound care included a hypochlorous acid 0.033% soak, application of a silver impregnated collagen or silver alginate packing covered with a silver impregnated foam bandage daily.
A total of 4 patients followed recommended post-surgical interventions of a pilonidal cyst. Age range of patients was 18-34 years old including 3 males and 1 female. Successful closure of wounds ranged from 4 –13 weeks with an average healing time of 7.25 weeks.
In conclusion, with use of the conservative protocol for pilonidal cyst care, patients can heal by secondary intention within the national wound healing benchmark. Conservative treatment is cost-effective and can be performed in an outpatient setting (Cevik, et al., 2018).

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CS17

Improved Confidence with an Innovative Negative Pressure Wound Therapy (NPWT) System

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Background:
Fournier's gangrene (FG) affects 1.6 out of 100,000 people (Broner, 2020). Treatment of FG includes aggressive surgical debridement and antibiotics; followed by negative pressure wound therapy (NPWT) (Doughty & McNichol, 2016). Published benefits of NPWT include: decreased length of stay, pain medication, improved patient comfort, quality of life and mobility. NPWT has demonstrated decreased valuable staff time (Bali et al., 2019).

FG patients acute care length of stay is approximately 20 days and Long Term Acute Care Hospitals (LTACH) play a significant role in patients awaiting flap and graft reconstruction (Radcliffe & Kahn, 2020). Wound treatment for FG with NPWT can be complex requiring a solid skill set for dressing technique (Verbelen et al., 2011).

Problem:

NPWT is prematurely discontinued as FG wounds are frequently associated with significant exudate and located in difficult anatomical locations, which makes NWPT application difficult.

Significance to practice and past management:

NPWT treatment is challenging. Our previous NPWT system was slow to address changes in fluid volume or viscosity and was discontinued due to difficulty in maintaining an intact dressing seal. Dressing integrity was further challenged when patients ambulate with bulky NPWT systems.

Solution/ Clinical treatment approach:

Last year, our LTACH adopted an innovative NPWT system that dynamically adjusts to changing wound conditions and notably reduced the number of alarms and leakage when caring for FG patients. Using this innovative NPWT system and key dressing techniques, our facility has had success managing patients with FG.

Outcomes and Conclusion:

Five patient FG case study: average wound reduction = 87%; average length of treatment 4.6 weeks.

Nursing staff stated that the new NPWT system was easier to use and it's lighter weight significantly improved patient ambulation. Our high standards of wound care were maintained. Barriers to staff usage and patient ambulation significantly decreased.

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CS18

Vasculitis: A Complex Case Study Utilizing a Team Approach

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75-year-old male admitted to hospital with bilateral legs wounds. Wounds are purple to black on feet and lower legs with petechia up to abdomen, painful to touch. Issues began with leg discomfort and rash, his PCP started him on oral steroids. Visiting from Florida the area of concern continued to get worse, increased steroids and stopped Coumadin. Patient becoming more lethargic and weaker presented to the ER. There is no record of any new medications. Dermatology completed a biopsy which confirmed leukocytoclastic vasculitis. Started on Prednisone. The rash become worse, and rheumatology suggest it may be the result of an infection, malignancy, or autoimmune diseases. Patient tested for chlamydia trachomatosis, nisseria, hep B, hep C, and HIV. Nephrology consulted due to possible renal involvement.

Blood work concerning for myeloma, hematology/oncology felt was more related to his acute illness.
Initial wound care by the attending was bacitracin TID. Due to painful dressing changes, switched to xeroform daily. On large doses of Prednisone rash was improving. Areas of concern declared themselves but due to large area and pain with dressing changes, continued once a day xeroform dressing changes. Discharged to rehabilitation after 22 days. Coumadin held but started on Eliquis. Patient signed out of rehab and brought back to emergency room with initial diagnosis of sepsis 3 days after discharge. Work up for sepsis negative so antibiotics stopped. Hypovolemia determined to be cause of change in mental status. Again, was discharged to a rehabilitation after 21 days with daily dressing changes using xeroform. As the wounds continued to declare themselves an enzymatic debriding agent was started daily. Wounds continued to improve as well as the patient's strength. He was discharged from rehabilitation after 14 days to return to Florida.
In conclusion this case demonstrates multidisciplinary input for a complex skin integrity concern.

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CS19

WOC Nurse Wound Care Delivery in the Patient with Delusion Driven Injury

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Statement of the Clinical Problem:
Self-injury with caustic agents is a common problem in patients with psychotic disorders that causes debilitating skin and tissue injury. The symptomology of psychotic disorders not only contributes to the injury but also causes significant challenges for the wound, ostomy, continence (WOC) nurse during interventions and treatment. Implementing gold standard care can be complex even for patients without mental illness. Complex plans can often lead to mistrust and refusal of care. Tailoring the care plan for this population is needed to align with evidence-based practice while promoting patient centered care.
Significance to Practice:
Patients with psychiatric diagnosis typically have poorer management and outcomes with physical health needs. Studies have shown increase in mortality, hospital length of stay, and complication rates after traumatic injury. The WOC nurse must adjust the care of these patients to break through the barriers of psychosis to adequately treat the wounds.
Clinical Approach:
Four case studies of patients with skin and tissue injury as result of delusion driven behavior will be presented. Treatment approaches fell into three categories: collaborating with the psychiatric team, establishing trust, and modifying the care plan for a patient centered approach. Essential to all each treatment approach is involving the patient and encouraging them to be active participants in their care.
Patient Outcomes:
WOC nurses find themselves in the crosswalk between aligning both the physical and mental health needs of the patient. Through efforts of the WOC nurses in collaboration with the psychiatric team, improvement of skin injury was noted in all patients allowing them to transition to the next level of care.
Conclusion:
A gap in the evidence-based literature relating to WOC care delivery in patient with psychosis was identified. This case study adds to the literature, but more research is needed.

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CS20

A Concentrated Surfactant Gel as a Cost-Effective Method of Supporting Debridement

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Category: Case study
Background: Debridement is a standard approach in chronic wound management. There are several types of debridement, including enzymatic and autolytic debridement. Enzymatic debridement utilizes an exogenous proteolytic enzyme, whereas autolytic debridement utilizes endogenous phagocytic cells and proteolytic enzymes to break down the necrotic tissue. In certain instances, a clinician may determine that either enzymatic or autolytic debridement is an appropriate option. In this era of value-based purchasing, the exploration of safe and cost-effective topical debridement-supporting products has become a focus among wound care clinicians. One such cost-effective agent that supports autolytic debridement and promotes a moist wound healing environment is the Concentrated Surfactant Gel (CSG).
This case series evaluated the wound healing outcomes and the cost aspect of utilizing CSG versus the enzymatic debridement protocol utilized in our acute care facility.
Methods: In this case series, 14 patients presented with chronic wounds. The treatment duration with CSG lasted from 3-35 days (1-25 50gm tubes utilized per patient every other day, nine patients, $90/tube). The treatment duration with the enzymatic debridement protocol lasted from 3-20 days (1-32 30gm tubes utilized per patient daily, five patients, $214.69/tube). Percent necrotic tissue and wound size measurements were taken.
Results: Reduction in percent necrotic tissue and wound sizes were comparable between both the debridement protocols. The total spend on CSG was approximately $4000 whereas that on the enzymatic debridement protocol was approximately $13,000 during the treatment duration of these patients at our facility.
Conclusions: A preliminary cost analyses from this case series indicated that, for this patient group, CSG was more cost-effective than the enzymatic debridement protocol utilized at our facility. Both the debridement protocols supported wound healing and were well-tolerated. Where a clinician determines that either enzymatic or autolytic debridement is appropriate, the cost-effectiveness of CSG may be an important consideration.

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CS21

Impact of Remote Wound Care during the COVID-19 Pandemic

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Statement of the Clinical Problem: The ongoing COVID-19 pandemic has created the urgent need for telehealth to play a larger role in wound care. The high prevalence of comorbidities in the wound care population also makes them more susceptible to COVID-19 infection and complications, and thus more at-risk when accessing in-person care.
Past Management: Chronic wound patients would be required to visit a clinic for an in-person visit, risking COVID-19 exposure, incurring travel expenses and requiring work and family arrangements.
Clinical Approach: The use of a patient-facing wound care app enabled remote wound assessment and management of wound patients from home.
Patient Outcomes: Patient 1 is a 57-year old diabetic individual with arterial insufficiency and a foot ulcer. Between June 2020 and January 2021, wound closure was monitored using the app. Its use avoided several in-person consultations and allowed the individual to self-isolate while maintaining continuity of wound care. Patient 2 is a 68-year old diabetic individual with a plantar ulcer. Between November 2020 and May 2021, the patient was followed up using the app until achieving full wound closure. In August 2021, the patient shared an image suggestive of cellulitis, which prompted an in-person evaluation and management of the infection without the need of attending to the emergency room. Patient 3, is an 19-year old individual with lupus erythematosus who developed COVID-19 infection in February 2021. As part of the course of the infection, she developed ulcers in the tip of the fingers. The use of the app allowed her to share images of her fingers with her doctor to monitor wound progression and guide treatment during her isolation.
Conclusion: Use of a patient-facing mobile wound management app resulted in numerous benefits. Telemedicine for wound care promises an extensive impact on care delivery during the COVID-19 pandemic and beyond.

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CS22

Empowering Patients to Manage Their Own Recurrent MRSA Ulcers - An Innovative, Effective Solution

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Challenge: Methicillin resistant staphylococcus aureus (MRSA) often causes painful, inflamed, deep, narrow, challenging-to-dress ulcers. Due to COVID-19, face-to-face wound management has been limited.
Significance: Because MRSA ulcers often recur, many patients prefer self-care. However, procedural pain and prescription needs block this goal. Example patients include: a middle-aged man whose first two MRSA ulcers required hospitalization for IV antibiotics, and a young man and young woman, both of whose first MRSA ulcers required outpatient incision and drainage plus oral antibiotics.
Solution: All polymeric membrane dressings (PMDs) relieve pain and control inflammation, continuously clean wounds, and partner with the body to balance moisture throughout the wound. Because PMDs slide off easily and control inflammation, dressing changes are atraumatic and usually so pain-free that patients can perform them independently. Mesh-reinforced antimicrobial rope cavity filler remains intact, even when saturated, making it the logical PMD configuration choice for MRSA ulcers.
After initial irrigation, PMD silver rope cavity filler is cut-to-fit and inserted into the narrow tunnel. Excess rope is stored in a freezer zipper-bag for future dressing changes.
Outcomes: Each patient was empowered to provide their own MRSA ulcer care, reducing healthcare system burden. PMDs reduced pain and inflammation, allowing each patient to perform their own dressing changes. The infections consistently cleared quickly. Every ulcer each patient developed has closed without incident using mesh-reinforced PMDs. The two young patients no longer suffer from MRSA ulcers. The middle-aged patient manages all new ulcers promptly with PMDs, with no complications and consistently quick healing.
Conclusion: Using dressings that safely increase patient independence, with initial tele-guidance from a health care professional, decreased the burden of MRSA ulcers on the health care system while improving patient satisfaction. PMD silver rope cavity filler consistently provided an elegant solution for a frustrating, painful, wound problem: MRSA ulcers.

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Is my Wound Infected? Use of Thermal Imaging to Assess a Wound's Infectious Status

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Statement of the Clinical Problem: Because the traditional signs of infection, rubor, dolor, calor, and tumor, are shared between incipient infections and aseptic inflammation, discriminating between these entities in the context of wound care represents a challenge.
Objective: Here, we describe our findings on the use of infrared thermal imaging (IRT) of wounds and how this technology can be used to discriminate between inflamed and infected wounds.
Methods: A series of 4 patients with wounds suspicious of infections were imaged with a mobile IRT camera. Confirmation of an infectious process was done by microbiological culture. Analysis of the images was performed and the features that correlated with an inflammatory vs. infectious process are presented here.
Outcomes: Patient 1 presented with a post-surgical dehiscent wound following an open reduction of a tibial fracture. The IRT pattern showed an area of increased temperature in the periwound. Microbial cultures were negative, and one week later, IRT imaging showed resolution of the periwound inflammation. Patient 2 presented an ulcer secondary to a previous episode of calcaneal osteomyelitis. Infection was suspected because ulcer healing had stalled. However, IRT imaging and bacterial cultures were negative. Patient 3 presented with a non-healing plantar ulcer. Except for discharge, the wound did not show overt signs of infection. However, IRT imaging over two subsequent weeks demonstrated a hot wound bed. Microbial cultures were positive and after a course of antibiotics, the wound started showing signs of healing. Finally, patient 4 presented with an non-healing inflamed wound. Microbial cultures were positive and IRT showed extensive hot areas in the wound bed and the periwound.
Conclusion: IRT imaging is a point-of-care technology that can potentially discriminate between aseptic inflammation and wound infection. Further studies need to be done to determine the cut-off value to diagnose the former over the latter.

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CS24

When the Perfect Pouch Does Not Exist: Pouching Pearls for the Complex Pediatric Ostomate

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Statement of the Clinical Problem:

A premature infant with postnatal diagnosis of imperforate anus requiring multiple emergent surgeries and eventually discharged home with a difficult to pouch end ileostomy. Pouching was further complicated by the patient's poor wound healing and proximity to gastric tube leaving the stoma deep in an abdominal skin fold amongst uneven scar tissue.
Past Management:
Surgical interventions included the creation of a descending loop colostomy, silo, then a transverse colostomy with mucus fistula, an end ileostomy, and a stoma revision by the Plastic Surgery team. Trial and application of traditional pouching principles were unsuccessful due to challenging pouching surface and limitations with pediatric appliance options.
Unable to accomplish wear time of greater than 4 hours which increased the need for staffing, supplies, and prolonged inpatient stay. Poor wound healing and constant stool exposure with a central line placed the patient at higher risk of infection, skin breakdown, and discomfort.
Current clinical Approach:
Utilized a combination of traditional ostomy and wound care supplies (ostomy paste, clear occlusive flexible dressing, infant ostomy pouch, and hydrocolloid) to obtain a wear time of 24-72 hours.
Patient Outcomes:
Optimized manageable pouching system for family to feel confident at home and to be discharged for the first time after a 10-month hospital stay. Now that patient has grown in length and width, Mom able to apply similar pouching principles with a new appliance and achieving an average 72- hour wear time.
Conclusions:
The techniques used in this case study could easily be transferred to other pediatric patients with similar pouching difficulties potentially decreasing inpatient stays and improving patient's quality of life.

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CS25

Novel Treatment of Necrotizing Fasciitis with Transforming Powder Dressing (TPD)

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Necrotizing Fasciitis (NF) is a rare but life-threatening soft tissue infection caused by bacteria that target the skin, subcutaneous tissue, and fascia, resulting in progressive necrosis.[1] Associated mortality is 12-46% as infection can spread quickly causing severe systemic toxicity and sepsis.[2] Proper management requires aggressive surgical debridement and appropriate adjuvant therapies. Early amputation of impacted tissues and maximum intensive care treatment are often required. [3] Routine wound care includes utilizing conventional antimicrobial dressings or negative pressure wound therapy (NPWT) to facilitate adequate wound granulation prior to grafting. Repeated dressing changes drain medical resources, increase patient pain and exposure to infection, presenting a significant clinical challenge.
TPD is a novel, non-occlusive transforming powder dressing (TPD) containing biocompatible polymers which aggregate upon hydration to form a moist, flexible, oxygen-permeable matrix

that protects the wound from contamination. Once applied, TPD may be left on the wound and topped off without requiring full dressing changes for up to 30 days. The dressing dries and flakes off as the wound heals. Three case studies incorporating TPD treatment in patients with NF and other comorbidities (such as diabetes or HIV) were reviewed. In all three cases, patients had extensive wounds with high pain scores, making NPWT or conventional dressing changes intolerable. In two of three cases, TPD was applied directly to the wound. In one case, TPD was applied over a meshed split thickness skin graft in the penile and scrotal area. Simple secondary dressings were used. All patients experienced complete wound closure without requiring additional surgical interventions. Pain scores declined dramatically, and pain medications were discontinued. Average frequency of primary dressing changes declined from once a day to once per week. TPD presented a safe and effective modality for treatment of NF wounds while reducing time to healing, patient pain and dressing change frequency.

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CS26

When Incisions Die: Jejunostomy Management in Complicated Peristomal Conditions

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Clinical Challenge

A 46-year old male with hemodialysis dependent end-stage renal disease and familial polyposis /desmoid tumors (Gardner syndrome) diagnosed in 2002, required multiple abdominal surgeries for tumor and bowel resections, with his most recent colostomy reconstruction 7 years ago. This surgical history resulted in short gut syndrome with high volume output. Most recently he was admitted with new polyps and GI bleeding leading to a 4 hour lysis of adhesions and a new end jejunostomy. This new stoma subsequently necrosed, requiring a return to OR and another new stoma. The result of these surgeries was a friable stoma close to an incision which necrosed and consequently dehisced. This evolution of abdomen contour and tissue changes posed a challenge for stoma management. Consistent leakage limited ability for self-management and discharge.

Significance to Practice

As the wound and ostomy evolved, a variety of appliance features and pouching principles, as well as topical wound management strategies, were implemented. The focus of this presentation is to share the various techniques used to promote optimal wound healing and successful self-care with adequate ostomy wear times. Digital photography highlights the wound and ostomy evolution throughout this patient's extended hospitalization.

Treatment Approach

The use of hypochlorous acid dressings, negative pressure wound therapy, non-cytotoxic antibacterial dressings, timely sharp debridement, and moisture absorptive protective sheets during wound evolution promoted wound healing to optimize peristomal condition to allow for pouching. Ultimately an approach that involved augmenting a convex wafer with other stoma care accessories allowed for consistent wear times of greater than 4 days with self-application.

Outcomes
The result was a pouching system to help optimize this man's quality of life for years to come. The combined wound healing and pouching techniques used would be easily transferable to those with similar peristomal wound conditions.

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CS27

A Challenging Case of Neonatal Necrotizing Fasciitis

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Neonatal necrotizing fasciitis (NNF) is a rare, life-threatening bacterial infection characterized by rapidly progressive inflammation and necrosis of the skin, subcutaneous fat, and muscle fascia and has a high mortality rate. This case describes a 4 day old transferred from an outside hospital with septic shock and scalp erythema and blistering. Within 6 hours of admission to the NICU the patient was taken to the OR for extensive debridement. Approximately 97% surface area of scalp was affected or about 10-12% of TBSA and post debridement defect measured 18 x 19cm full thickness including 4 x 3.5cm down to bone at occiput.
Traditional coverage options for a defect of this size were limited. Immature neonatal skin physiology presents a reconstructive challenge. Spilt-thickness skin graft with autologous tissue is traditionally used for coverage, however in this case the defect was so large that autologous graft would create too large a donor site and compromise physiologic stability. Therefore, an alternative method for definitive coverage was required.
Cultured epidermal autograft (CEA) has been used in the pediatric population for coverage of large surface area burns and avulsion wounds. This option provided coverage while using only a small donor site to harvest epidermal cells. The patient was grafted with CEA during week 6 of admission. Successful grafting occurred in about 85% of the wound and the patient has been followed in outpatient Wound, Plastic Surgery clinics.
Neonatal necrotizing fasciitis of the scalp is a rare occurrence often attributed to fetal scalp electrode. Extensive scalp coverage is challenging due to surface area, morbidity of the donor site, and immature neonatal skin. CEA can successfully provide coverage of large surface scalp necrotizing fasciitis. Parent education is important regarding short and long term care. Ongoing follow-up is required for surveillance, complete wound healing and treatment of recurring wounds.

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CS28

Clinical Outcomes Using New Hybrid Drape with Negative Pressure Wound Therapy for Various Wound Types in Difficult Anatomical Locations: Case Study

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Statement of the Clinical Problem
Negative pressure wound therapy (NPWT) is traditionally applied using an adhesive acrylic drape which can present challenges for patients and clinicians. Removal of the standard drape can harm surrounding tissue and cause pain and discomfort for patients.[1,2] Additionally, applying the drape can be cumbersome, and it cannot be re-positioned after placement.
Past Management
Since the introduction of NPWT, the standard acrylic adhesive drape, included in all dressing kits, has been applied over the foam dressing for all wounds managed with NPWT at our hospital.
Current Clinical Approach
Recently, we began using a new hybrid NPWT drape with a low tack acrylic adhesive and silicone perforated layer[3] as a first line NPWT drape for complex wounds, primarily in difficult anatomical locations. We present outcomes with the acrylic-silicone hybrid NPWT drape utilized in five complex wound cases: (1) deep abdominal wound close to an ostomy, (2) a diabetic foot ulcer, and as a bolster over split- or full-thickness skin grafts in the (3) groin area, (4) lower leg, and (5) forearm. Dressing was changed every 2-3 days for wounds and removed after 5 days over a graft. The drape was repositioned as necessary upon dressing application.
Patient Outcomes
In all cases, a tight seal was maintained between dressing changes and until dressing removal over the graft. Neither replacement nor repositioning of the drape was required during therapy. Hybrid drape removal was easier and less painful than with the traditional NPWT drape.
Conclusions
In our experience, dressing application and removal were simplified with the new hybrid NPWT drape versus the standard drape. At dressing changes, all patients experienced improved comfort due to easier removal of the hybrid drape.

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CS29

Application of TIMERS wound Management in hard to heal Venous Leg Ulcer: A case study

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Statement of Clinical Problem: A hard-to-heal wound is defined as the type of wound which fails to heal using standard treatment. We evaluated three patients with venous leg ulcers with characteristics:

- A 73 years old woman with venous leg ulcers and diabetes mellitus type 2 (patient I).
- A 52 years old man with venous leg ulcer and obesity (Patient II).
- A 57 years old man with a refractory venous ulcer (Patient III)

The wound assessment revealed that it stuck in stage II for more than three months of regular treatment using TIME management. Reassessment showed that the patient poorly adhered to

compression therapy; patients reported distressful feelings towards their wounds that led them not to follow the suggestions.
Past Management: TIME management was applied using dressing that depend on patient's need along with four layer bandage. Psychosocial issues were poorly addressed.
Current Clinical Approach: New approach was employed to address the patient's issues using TIMERS wound management which stands for TIME + Repair/Regeneration and Social-patient's related factors (RS). TIME management was similar to previous treatment. For Regeneration/Repair, electrical stimulation and infra-red therapy were applied to improve the blood flow and tissue regeneration. As for social intervention, we improved the patient's engagement on compression by replacing the four-layer bandage with compression stockings because the patient felt more comfortable using compression stockings. We also employed active listening towards their psychosocial issue to rise patient's adherent.
Patient Outcome: The patients showed significant improvement after the TIMERS method was employed. Patients I and III healed within two months of treatment, while patient II showed a prominent epithelialization rate and healed after more or less eight months after treatment. The prolonged healing time was due to a weight management struggle.
Conclusion: application of the TIMERS method accelerate healing of patients in this study.

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CS30

Intraoperative Hypochlorous Acid to Promote Wound Healing in Patients with Pilonidal Disease

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Statement of the Clinical Problem
Pilonidal disease is the development of exquisitely painful abscesses in the coccygeal region.[1] It occurs in 25 per 100,000 people, predominantly in teenagers.[2] The exact pathophysiology remains unknown. Treatment may include surgical excision followed by a prolonged course of wound healing with frequent dressing changes.[3] Pilonidal disease, treatment, and recovery can have a negative impact on quality of life, social functioning, and participation in school and work.[4]
Past Management
Approaches to postoperative wound care ranged in complexity from normal saline dressing changes to negative pressure wound therapy (NPWT).[5] While recent advances in wound care have demonstrated potential in reducing the time from surgery to complete healing, few studies have included pediatric patients with pilonidal disease.
Current Clinical Approach
This case series describes the use of a 10-minute intraoperative antimicrobial wound soak with hypochlorous acid in three pediatric patients who underwent surgical excision of pilonidal disease.
Patient Outcomes
Ms. A is a 16-year-old with extensive disease referred to the skin, wound, and ostomy team (SWOT) with a postoperative wound measuring 5.6cm x 5.5cm x 2.7cm (83.2 cm^3). They had 29 days of NPWT, 30 days with no NPWT, and 59 total wound days. Ms. H is a 16-year-old

with simple disease and a postoperative wound measuring 1.3cm x 3cm x 1cm (3.9 cm^3). They had 21 NPWT days and 7 days with no NPWT for 28 total wound days. Ms. V is a 14-year-old with extensive disease and a wound measuring 2cm x 4.8cm x 2 cm (19.2 cm^3). They had 14 NPWT days, 28 days with no NPWT, and 42 total wound days. These wounds healed without recurrence, complications, or need for hospitalization.

Conclusions

Intraoperative hypochlorous acid may reduce time from surgery to wound healing in pediatric patients with pilonidal disease; additional research is warranted.

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CS31

Improving Patient Experience and Administrative Freedom with an Innovative Negative Pressure Wound Therapy Device.

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Statement of the Clinical Problem:

Negative pressure wound therapy (NPWT) is considered to be an effective wound treatment, yet research has repeatedly highlighted a need for improvement. Research has shown that patients feel NPWT has a positive impact on their wound, however, patients also reported challenges such as noise issues, and reduced mobility[1]. Clinical and support staff have been burdened with daily administrative distractions to micromanage pump usage, pump reprocessing and reliable pump inventory.

Past Management:

The previous NPWT system was determined to be noisy, hinder patient mobility, and required daily documentation additional to the facility charting system. Par level maintenance of the NPWT device was also outside of facility processes and reliability concerns were experienced.

Current Clinical Approach:

An innovative negative pressure wound therapy system that met the standard of care, as defined by EWMA, by maintaining set pressure at the wound site[2] was evaluated. This innovative system exceeded our expectations for clinical performance[3], reliability and significantly reduced the daily administrative burden for NPWT device management.

Patient Outcomes:

Six patient case series exhibiting a range of challenging wounds included necrotizing fasciitis, CABG dehiscence and osteomyelitis with exposed bone, Fournier's gangrene and pressure injuries. The innovative NPWT system was applied to patients. Dressings were changed 2-3 times weekly and wound measurements were taken. The staff noted their overall satisfaction with the device and provided notable patient feedback.

Conclusions:

The results from six patients illustrated positive patient outcomes with an average wound reduction of 71%. Healing time on therapy averaged 3.7 weeks. Overall patient and staff satisfaction with the innovative device was high. The increased ease of use included the

eradication of daily documentation outside of the facility charting system. A NPWT budget reduction of 68% over the prior year (six figures) from the previous NPWT device was achieved.

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CS32

Cutaneous Tophaceous Gout: A Closer Look at an Uncommon Wound Presentation

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Significance to Practice

Wound care clinicians evaluate atypical wounds and consider variables that may interfere with healing. Early recognition of cutaneous tophaceous gout crystal formation in a sacral wound is crucial in assuring the multidisciplinary approach needed for success with complex wounds. Although gout affects more than 8 million Americans (roughly 4%) cutaneous gout lesions are rare, with wound bed tophi (urate deposits outside of the joints) even more rare. Thus, many WOC RN's may be unfamiliar with tophaceous gout wounds.

Clinical treatment, outcomes, conslusion:

RG, a 62 year old male, was admitted to acute care facility in the Mid-West for a recent fall and lingering left hip pain. RG was a renal transplant survivor, with medical history including hypertension, diabetes, bilateral BKA, and a one year history of sacral pressure injury. The sacral pressure injury was without erythema or surrounding induration, however the surface of the wound was covered with a hard crystalline substance that was bright white in color and firmly adherent. A scrotal wound was affected with a similar white crystalline inclusion; both wounds were very painful to the patient.

A review of the scant literature related to cutaneous gout and tophaceous gout wound management was conducted and will be discussed. Collaborative practice with Physical and Occupational therapy for mobility strategies and local wound care modifications to reduce the acceleration of tophi formation are presented. This patient was discharged prior to wound resolution, however provided a great opportunity for learning, including consideration of interdisciplinary collaboration, surgical debridement, recurrence likelihood, disease and wound progression and pain management strategies. Collaboration with renal medical specialists provided crucial specific uric acid level management, without which wound resolution would be unlikely. A collaborative, multi-disciplinary approach is optimal to provide the best wound management and resolution when wound tophi are present.

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CS33

From Nonhealing Wounds to Healing Wounds

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Clinical Problem
Four Inpatients: Pt.1-Male, quadriplegic with stage 4 sacral pressure injury (PI) which evolved from Deep Tissue Pressure Injury (DTPI); Pt. 2-Male, paraplegic, exposed bone, osteomyelitis, stage 4 sacral PI; and left ischial PI; Pt. 3-Female, fell at home, resulting in unstageable spine PI. All PI's required debridement. Pt.4-Female with chronic painful odorous venous insufficiency ulcer.
Past Management
Pt.1: Cadexomer Iodine Gel/gauze daily-4 days, Hydrogel/gauze daily-7 days, surgical debridement, daily Collagenase for 38 days. Pt. 2: Prior care unknown. Pt. 3: Anti-sheer absorbent dressing/extra protective barrier cream for 6 days. Pt. 4: Radio frequency ablation, Metronizole topical, cellulose-oxidized collagen, elastic bandage, stab venectomy.
Current Clinical Approach
Pt.1: Silver polymeric membrane dressing cavity filler (PMD filler) covered by Extra-thick PMD changed daily. Pt. 2: Silver PMD filler covered by extra-thick PMD changed daily for 1 week, then every other day. Pt. 3: PMD with or without silver or extra-thick PMD applied and changed every other day. PMDs temporarily paused for surgical debridement and hypochlorous acid wet-to-dry dressings, then PMDs resumed. Pt. 4: Silver PMD filler daily, thick gauze/light gauze wrap daily. All wounds cleansed with wound cleanser per facility protocol.
Patient Outcomes
Pt.1: 9 days of PMD use, 50% slough debrided. PMDs helped control inflammation and resolved new DTPI. 77 days 100% granulating tissue. Pt. 2: 29 days, sacral PI 100% granulated, ischial PI 80% granulated. Pt. 3: After PMDs resumed, discharged in 52 days 100% granulation tissue. Pt.4: After 10 days PMDs, the ulceration was beefy red with new tissue growth, no odor or pain at dressing changes. All patients discharged before closure.
Conclusions
PMD use resulted in elimination of daily collagenase application, total wound care cost savings and improved wound healing outcome, all of which were deciding factors in facility implementing PMDs.

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CS34

Portomesenteric Vein Thrombosis: What is it & Why is Important to the Ostomy Nurse?

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Statement of the Clinical Problem
Portomesenteric vein thrombosis (PMVT) is an uncommon, but serious complication following colorectal surgery (Gorgun et. Al. 2018). Ostomy nurses may encounter PMVT in their practices, but may not be educated about it.

Past Management
Management, including recognition of signs, symptoms, treatment, and patient education has traditionally been by surgical and medical teams. It is diagnosed via computed tomography (CT) scan and is treated with anticoagulation therapy.
Current Clinical Approach
Ostomy nurses knowledgeable of PMVT can provide improved patient care and education.
Patient Outcomes
The cases presented illustrate the potential course of PMVT. Each patient had ulcerative colitis refractory to medical management and underwent single port laparoscopic total abdominal colectomy with end ileostomy.
A 37 year old woman was discharged three days after surgery. During the drive home she developed abdominal pain, nausea, and vomiting.
A 50 year man was discharged on postoperative day two. Three days later he experienced nausea, high stoma output, and abdominal pain.
A 31 year old man's stoma was edematous and congested. To facilitate output the stoma was intubated and he was taught to intubate and flush his stoma as needed. At home he experienced abdominal pain and the stoma only functioned with intubation, which was done 4 to 5 times daily.
Due to their symptoms each patient went to their local emergency room. CT scans were obtained. Portal vein thrombus, superior mesenteric vein thrombus, and portal vein/inferior mesenteric vein thrombus were diagnosed respectively. Anticoagulation treatments prescribed were, respectively, enoxaparin sodium injection, heparin bridged to warfarin, and apixaban. All recovered and ultimately were able to complete their operative course.
Conclusions
Learning to recognize the signs, symptoms and treatment for PMVT allows ostomy nurses to play a vital role in care and education of patients who experience this complication.

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CS35

Trauma and Burn Wound Therapy: A New Practice Paradigm

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Clinical Problem/Challenge
A 2021 press release from the American College of Surgeons notes that we are experiencing a national surge in injuries, including a significant increase in gunshot wounds. Our trauma center has felt this sharp increase including three recent gunshot wounds in children under the age of nine. Two of these incidents were fatal, but fortunately the third victim survived. We

present her case along with other complex patients to illustrate advances in trauma and burn wound therapy using hypochlorous acid preserved wound cleanser (HAPWOC).

Significance to Practice including Past management

We report our experience using HAPWOC with and without negative pressure wound therapy with instillation (NPWT-i) on a variety of traumatic and burn wounds. Our intent is to validate use of this therapy for healing these complex wounds.

Clinical Treatment Approach We utilized HAPWOC in combination with NPWT-i and wet to dry gauze. We present six case outcomes in patients aged from 32 months to 75 years. The injuries include a gunshot wound, blast injury, motorcycle crash, crush injury, motor vehicle crash, and an industrial pressure washer injury. The NPWT-i settings ranged from pressures of -50 to -150 mmHg, soak phases ranging from 5 to 10 minutes, and instillation cycles of either 2 or 3 ½ hours. The HAPWOC gauze soaks were changed twice daily.

Outcomes

Of the 6 patients presented, 5 have complete closure. Four closures were by split thickness skin grafting, one closed by secondary intention, and one will receive a rotational flap. Five of these patients have discharged to home.

Conclusions

In our experience, trauma and burn wounds benefit from the use of HAPWOC. We find this therapy effective in healing complex wounds when used in conjunction with NPWT-i and when HAPWOC is used in wet to dry gauze dressings.

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CS36

Aluminum Acetate: A Solution for Peristomal Irritant Dermatitis

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Statement of the Clinical Problem

There are anecdotal reports that aluminum acetate is valuable for managing peristomal irritant dermatitis. Yet, clinical evidence of its positive effects has not been well documented.

Past Management

Properly fit pouching systems coupled with skin barrier sheets, stoma powders, and liquid skin protectants are used to manage peristomal skin damage. However, none of these products offer immediate comfort.

Current Clinical Approach

Aluminum acetate solution is used to soothe and dry peristomal irritation before properly fit pouches and necessary accessory products are placed.

Patient Outcomes

A 68 year-old woman had an end ileostomy for 22 years. After parastomal hernia repair she was unable to maintain a pouch seal and she developed extensive irritant dermatitis. A 15 minute soak with aluminum acetate solution provided a soothing effect and made the skin less moist. When the soak was placed she commented that her skin felt better. A more appropriate pouching system was then applied. She returned one week later for follow-up. Her skin was healed and there were no signs of irritant dermatitis.

A 64 year-old man with a high-output double barrel ileostomy was admitted with severe irritant dermatitis. Due to pain he could barely tolerate stoma care until aluminum acetate solution was incorporated. His skin improved steadily until discharge. One week later he was

readmitted, again with severely damaged skin. He refused care until aluminum acetate solution was obtained.
A 55 year old man with an end ileostomy and an enteroatmospheric fistula in his midline was admitted with irritant dermatitis. Serial use of aluminum acetate soaks coupled with an improved pouching system, resulted in improved patient comfort and healed skin.
Conclusions
Aluminum acetate solution is an effective first step to managing peristomal irritant dermatitis. It improves patient comfort and dries skin for better pouch adhesion.

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CS37

Comparison of Elastomeric Skin Protectant and Zinc Barrier Cream Use on Venous Leg Ulcer Periwound Skin

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Statement of the Clinical Problem: Venous leg ulcers (VLUs) have a history of prolonged wound healing, high rates of recurrence, and the fragile periwound skin is prone to breakdown and medical adhesive-related skin injury.[1,2]
Significance to Practice: VLU periwound skin can contribute to wound integrity and should be thoroughly assessed throughout VLU care. VLU periwound skin was examined in 5 patients following use of zinc barrier cream or elastomeric skin protectant with topical wound dressings and multilayer compression wrap.
Clinical Treatment Approach: Endovenous ablation was performed, followed by application of zinc barrier cream or an elastomeric skin protectant to periwound skin prior to application of topical wound dressings and multilayer compression wraps. Dressings were changed every 7 days. Wound healing and periwound skin condition were monitored.
Outcomes and Conclusions: Five patients presented for care with medial ankle VLUs. Average patient age was 72.6 years old. Common patient comorbidities included hypertension, obesity, venous insufficiency, and varicose veins. After 3 weeks, the skin protectant was switched to elastomeric skin protectant due to periwound skin injury during the removal of the zinc barrier cream. All patients showed periwound skin improvement after elastomeric skin protectant use was initiated. Unwanted product buildup was noted with the zinc barrier cream during application, compared to the elastomeric skin protectant. The removal of the zinc barrier cream at dressing changes often led to periwound skin epidermal stripping. Epidermal stripping was not observed with the elastomeric skin protectant, as it wears off and does not require removal. In these 5 patients, use of an elastomeric skin protectant under wound dressings and multilayer compression wraps resulted in improved periwound skin compared to zinc barrier cream use.

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CS38

Negative Pressure Wound Therapy With Instillation and a Novel Silicone Hybrid Drape Use: An Initial Experience

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Statement of Clinical Problem: Traditionally, negative pressure wound therapy with instillation and dwell (NPWTi-d) is applied to the wound using foam dressings and an adhesive acrylic drape. However, the traditional drape is not able to be repositioned following initial placement and can be painful to remove at dressing changes.[1,2]
Significance to Practice: A new hybrid polyurethane drape with acrylic adhesive and a silicone perforated layer (HA-drape) has been developed for use. This 3-patient case series describes the initial use of NPWTi-d and HA-drape.
Clinical Treatment Approach: Three patients presented for care. Sharp debridement was performed, and intravenous antibiotics were given, as necessary. Delicate structures were protected prior to NPWTi-d with HA-drape application. NPWTi-d dressings were applied followed by HA-drape application. Acetic acid or normal saline was instilled into the wound bed with a dwell time of 5-10 minutes, followed by 3 hours of negative pressure (-100 mmHg to -125 mmHg). Dressings were changed every 2-3 days. Wound healing and periwound skin condition were monitored.
Outcomes and Conclusions: The patients presented with exploratory laparotomy for necrotizing pancreatitis, transmetatarsal amputation wound dehiscence, or necrotizing fasciitis. The HA-drape was able to be repositioned following the initial placement. No negative pressure or instillation solution leaks were observed with HA-drape usage. HA-drape removal was easy with no patient-reported pain at dressing changes compared to previous experience with traditional drape. Increased development of healthy granulation tissue was observed in the wound beds of all 3 patients. No periwound skin irritation was observed in any patient. The HA-drape application and removal was easier compared to previous experiences with traditional drape. In these 3 patients, use of NPWTi-d with HA-drape resulted in increased development of granulation tissue in the wound bed without the loss of negative pressure seal, instillation solution leaks, or periwound skin irritation.

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CS39

No Pain, All Gain: Creating Patient Comfort with the Use of a Soft Silicone Nonadherent Layer Under Negative Pressure Wound Therapy

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Clinical Challenge: We are a team of seven wound, ostomy, and continence nurses in a Magnet, level one trauma center with a one thousand bed capacity. Our team manages approximately 30 negative pressure wound therapy (NPWT) dressings per week for pediatric and adult patients. Some patients report extreme pain during the dressing change. Our team wanted to reduce the pain experience for NPWT patients.
Past Management: Our team has used several types of contact layers. We have used petroleum dressings and oil emulsion dressings while trying to reduce pain and increase patient trust and satisfaction. Pain continued to be a significant problem as these contact layers often adhere to the underlying tissues making them painful to remove.
Solution/Clinical Treatment Approach: We have discontinued most of the use of the petroleum and oil emulsion dressings. We began to use soft silicone contact dressings which are easy to apply, do not stick to underlying tissues, and are very easy to remove.
Outcomes: Pain was reduced as evidenced by patient's verbal statements. Many patients demonstrated less anxiety toward subsequent dressing changes due to less pain experienced in the previous dressing change. Several of our patients in the 20-30-year age range verbalized increased satisfaction toward having NPWT.
Conclusion: The wounds continued to improve with good formation of granulation tissue during NPWT with soft silicone contact layer. Both trust in the WOC nurse team and decreased pain during dressing change was achieved.

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CS40

A Novel Pre-Grafting Wound Management Technique to Promote Granulation in Complex Painful Wounds

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Skin grafting (SG) is used to provide coverage in both acute and chronic wound settings. Preparation of the wound bed with development of granulation tissue is vital for graft success.[1] Traditional Standard of Care (SOC) wound management principles involve debriding the wound followed by negative pressure wound therapy (NPWT) or conventional dressing applications to accelerate wound healing prior to grafting.[2] Current SOC is limited in complex painful wounds. NPWT deployment is often difficult and painful.[3] Pain is also an issue associated with repeat dressing changes.
We present three cases involving a novel transforming powder dressing (TPD) with extended wear time. TPD forms a moist matrix upon hydration that covers and protects the wound while releasing excess exudate through vapor transpiration. Granulation appeared accelerated in all three cases. Reduced dressing changes minimized wound disturbance, significantly reduced nurse utilization with decreased overall pain and no infectious complications.
Case 1: Vasculitis Ulcer (Limb Salvage)

- 42-year-old male with chronic vasculitis, progressive necrosis, wound infection, exposed bone and significant pain (10/10); failed SOC treatment with amputation seen as only solution; treatment with TPD resulted in decreased pain, prolific granulation with full coverage of exposed bone and was grafted after 70 days of weekly TPD applications and topical antibiotics.

Case 2: Improvised Explosive Device Blast

- 40-year-old male with a large and severe painful buttock injury from firework accident; NPWT was difficult to place and not well tolerated. Wound depth reduced from 5 cm to 2 cm by Day 7 and wound was ready for grafting by Day 14 with only one interim TPD reapplication.

Case 3: Abdomen Wound

- 40-year-old female with large complex abdominal wound from a car accident; NPWT could not be placed due to exposed intestine; TPD was applied with foams to absorb exudate; wound was ready for grafting by Day 18.

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CS41

Standardization and Extent of Use of a Hypochlorous Acid–Preserved Wound Cleanser in an Inpatient Acute Care Setting

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Introduction: Wound cleansing via pre-application of a pure hypochlorous acid–preserved wound cleanser (HAPWOC) has evidence-based clinical benefits. Standardization in cleansing impacts practice when used universally in conjunction with negative pressure wound therapy (NPWT) with and without instillation. Indication for HAPWOC includes serious conditions related to moisture associated skin damage (MASD) that can progress to severe skin interruption if not managed promptly.

METHODS

In the 454 bed Level 1 Trauma hospital, multiple HAPWOC applications were chosen to understand the extent of standardization during a 2-month period (May/June 2021). The numbers of patients treated with NPWT with and without instillation, and with MASD were assessed using a chart review process. Three cases will be presented in a poster presentation.

RESULTS

50/146 patients that received HAPWOC, received it in association of NPWT. Wounds remained moist and non-malodorous. HAPWOC is used in areas within the multiple folds of skin in the creases of the abdomen, pannus, bilateral groin, and bilateral axilla that are commonly recognized as moderate to heavy moisture areas. 22 of 146 patients treated with HAPWOC had MASD treated and a return of skin to healthy status.

Conclusion:

HAPWOC applied to MASD, in addition to NPWT with and without instillation demonstrated high efficacy without adverse events. Debris removal was visible in the NPWT cases presented (standard NPWT). Hospital stays can be short, but a wound bed that is well prepared at the start is much more likely to heal. Therefore, the author uses HAPWOC widely (standardized) and recommends use after hospital discharge. MASD can be overlooked when in the presence of more serious wounds or conditions. MASD can progress with malodor, open and painful wounds. Cleansing with HAPWOC using proper application techniques and gentle removal

tends to be painless and effective. HAPWOC practice is consistent with guidelines[21-25] recommending use of such products.

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CS42

Utilizing Long Wave Infrared Thermography to Detect Inflammatory Changes in Clinical Practice

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Statement of Clinical Problem: During skin/Wound assessment, the bedside clinician is limited to a visual assessment. There is a gap in bedside assessment for providing non-visual, thermographic, quantifiable data. What if the bedside clinician could safely assess inflammation without delay utilizing quantifiable thermographic findings to implement care until other test results (invasive and noninvasive) complete the clinical story?
Past Management: The current method of visual skin inspection, (the gold standard), evaluate color, temperature, texture, moisture and integrity, which provide subjective data.
Current Clinical Approach: Long Wave Infrared Thermography, (LWIT), images were taken at the bedside as part of the skin/wound assessment. Using camera software, a review of the images provided temperature differentials of healthy tissue and the wound/periwound. Warmer temperatures identify increased metabolic activity (inflammation/infection), and cooler temperatures identify decreased metabolic activity (hypoperfusion/ischemia). The temperature is quantified with objective measurements.
Patient Outcomes: All cases show changes to the treatment plan driven from the objective quantified thermal image data, which immediately altered the treatment plan and improved patient care outcomes.
Conclusions: LWIT is not a diagnostic tool alone, but used as an adjunct to the visual assessment to add to patients clinical journeys. These successful cases showcased that the information gathered and compared to the comprehensive assessment determined the need for further diagnostics or advocacy to meet the individualized needs of patients.

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CS43

Jet Lavage Irrigation of Severe Chronic Pelvic Pressure Injury with Modified Sodium Hypochlorite: Case Report

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Statement of Clinical Problem
Difficult chronic sacral pelvic pressure injuries can pose a challenge to medical providers in terms of therapeutic choices. This report discusses the addition of antiseptic as a low pressure irrigated fluid with jet lavage irrigation in the nursing home setting.
Past Management
A 72-year-old male has a large difficult stage 4 pelvic pressure injury over the sacrum for the past 8 years that has not responded to standard of care treatment. After surgical debridement, he was entered into our investigational study where the wound was treated daily (ave. 5 days/week) with low pressure jet lavage irrigation with 3 liters of fluid (IRB #6066, Stirling Investigational Review Board, Atlanta, Ga). After 13 months treatment, we noticed that wound cleansing was not complete with our protocol.
Current Clinical Approach
We added squeeze bottle irrigation with modified sodium hypochlorite getting the complete cleansing we sought. The IRB reviewed use of the antiseptic and approved the application through the jet lavage irrigator. We have now done 120 daily treatments over 6 months and assessed a small series of exams. After a long weekend of standard care we typically find a heavy bacterial growth of three different bacteria, Acinetobacter baumannii, Pseudomonas aeruginosa, and group B Streptococcus. Autofluorescence imaging was done after treatment on Monday with 72 hours interval.
Patient Outcome
After seven 'long weekend' three day intervals, autofluorescence imaging revealed completely removed detectable bacteria by our method (Sensitivity: <log 2 colony forming units/gram of tissue). The wound appeared 'black' with the 405 NM violet light. We have identified no complications or concerns with this experience.
Conclusions
We believe irrigated antiseptics have a role in treating biofilm bacteria, and our experience justifies that use with difficult chronic wound infections.

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CS44

Long Wave Infrared Thermography (LWIT) as an Assessment Adjunct for Patient Advocacy

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Statement of Clinical Problem: T
The current method of skin inspection utilizing the components of color, temperature, texture, moisture and integrity, provide subjective data. There is a gap in the nursing skin assessment

for providing non-visual quantifiable data. Quantifiable data is important for nurse advocacy in patient care.
Past Management: Signs and symptoms such as pain and redness are often part of a 'wait and see' approach, the accepted 'standard of care'. This approach is multi-faceted: to avoid stress for the patient, unnecessary diagnostic tests, and higher costs. Nursing advocacy has been limited to conversations with patients/caregivers, MD driven testing, and subjective patient presentation.
Current Clinical Approach: LWIT provides temperature differentials of healthy tissue and/or wounds/peri-wound. Warmer temperatures indicate increased metabolic activity (hyperperfusion/inflammation), and cooler temperatures indicate decreased metabolic activity (hypoperfusion/ischemia). The temperature is quantified with objective measurements. This data, along with the results of a thorough nursing assessment, can help drive improved patient safety and outcomes. Placing LWIT at the bedside is a nurse driven assessment adjunct that provides quantifiable data which expands the current nurse advocacy role.
Patient Outcomes: Advocating for further interventions with all case study patients was successful using LWIT as an assessment adjunct. One patient was placed on antibiotics and had a seroma drained based on two separate, quantifiable LWIT assessments. Another patient progressed to further diagnostic testing based on decreased metabolic activity quantified by LWIT. The final patient progressed to further diagnostic testing resulting from increased metabolic activity quantified by LWIT.
Conclusion: LWIT is a valuable bedside assessment tool that nurses may utilize when advocating for further patient intervention.

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CS45

Rapid Therapy for a Full-Thickness Burn

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Statement of the Clinical Problem
Burn injuries place patients at risk for wound infection, cellulitis, and scarring complications. This case study presents a13-year-old female who, while pinned under a golf cart, suffered a full thickness chemical burn from battery acid which leaked onto her left trochanter. The burn had 100% fibrin/slough and large amount of drainage. The pain was 8 (0-10 pain scale).
Past Management
The patient was seen in the emergency room in a remote area far from home. Emergency Department wound care orders: cleanse with soap and water; daily application of silver sulfadiazine; cover with a dry dressing until healed. The silver sulfadiazine was sticky, painful, and burned with daily application. The 13-year-old disliked wearing bandages, therefore consideration for a new comfortable bandage was critical to ongoing care.
Current Clinical Approach
Two days after the accident, the patient and family arrived home. The patient's mother, a health care provider, applied silver polymeric membrane dressings (PMDs) instead of the original orders. PMDs were selected since PMDs control inflammation and reduce wound pain. The silver PMD was secured with a film dressing. Dressings were changed every two days with showering. Following manufacturer instructions, there was no cleansing after the initial cleanse.
Patient Outcomes

Pain was reduced to 5 (0-10 pain scale) within 2 days and then no pain but itching. Itching was gradually resolved. The fibrin/slough was autolytically debrided with the silver PMDs. The silver PMDs were easy to use, reduced time to perform dressing changes and reduced frequency of dressing changes compared to silver sulfadiazine management protocol. In 34 days the epidermis was closed.

Conclusions

PMDs reduced patient's wound related pain and the wound closed quickly. There were no complications of infection, cellulitis, or scarring. In addition, PMDs kept a 13-year-old, who hates dressing changes, cooperative with care.

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CS46

Ouch!! My Finger!

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Clinical Problem

Acrylic nails are often associated with increased risk of nail bed infections due to poor fitting of the artificial nail, or damage to the artificial nail. Infectious microorganisms can accumulate in the space between the natural nail and the acrylic nail, the nail plate, nail bed and nail folds. Injuring a fingernail covered by an acrylic nail increases the risk of developing a nail bed infection.

Past Management

No past management.

Clinical Treatment Approach

60 yr. old female with acrylic nails developed a nail bed infection of her left ring fingernail. Subsequently the finger was injured, the acrylic nail was removed, and the natural nail was lost. The nail bed had erythema, edema, inflammation, infection, and pain. A polymeric membrane finger dressing (PMD) was applied to the finger after the nail had been lost. PMDs were used instead of previous best practices which were prescription drugs, over-the-counter drugs and numerous home remedies.

Patient Outcome

PMDs reduced pain level from a 10 (0-10 pain scale) to 1 within 30 minutes. The erythema and inflammation decreased within 24 hours. Signs of infections were gone within 6 days of using PMDs without use of systemic or topical antibiotics. PMD was changed every three days for two weeks. The natural nail became pink and new growth began to occur within two weeks. Client returned to nail salon and received a new acrylic nail 6 weeks after PMDs initiated.

Conclusions

Wearing acrylic/fake nails is a personal choice. Unfortunately, consumers are not aware that these fashion statements may result in significant long-term consequences.

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CS47

The use of a novel Dual Compression System (DCS) in managing edema and venous leg ulcer in patients with diabetes: Results of a comparative post-hoc analysis

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Statement of Clinical Problem: Use of compression in the management of venous reflux condition is highly recommended but the use of bandages on venous ulcer patients with diabetes is less researched. General concern exists about affecting circulation in diabetic patients via improperly applied compression. A post-hoc analysis of a real-life study on patients with both the venous and diabetic condition is presented with a novel compression system with dual compression system (DCS)
Methodss: The clinical data from a large prospective, multicentre, observational study, including diabetic and non-diabetic patients treated with the DCS in outpatient settings or home visits for max six weeks (4 clinician visits maximum) were analysed. Circulatory status of patients with diabetes was checked a priori. Main outcomes included wound healing rate, healing progression, assessment of oedema, ankle mobility, local tolerability and acceptance of the compression therapy.
Results: 677 VLU patients and/or with limb oedema due to CVI were studied, 185 (27.3%) were also diabetic. At the final visit (mean 28d), wound closure (33.9% diabetic vs 30.2% non diabetic), and oedema resolution (67.3% vs 66.2% p=0.805) were similar. Slippage was same (<4%) in both and most reported comfort. At the first interim visit, tightness sensation, warm feeling or pain were more frequently reported by patients with diabetes. These differences tended to disappear by final visit, except pain which was reported by 11.9% (diabetic) vs 6.1% (non-diabetic). The DCS was 'very well' or 'well' tolerated and 'very well' or 'well' accepted by a large majority of the patients in both groups. No adverse events were reported from the diabetic group.
Conclusion: Results demonstrate similar efficacy and good safety profile of DCS in diabetic and non-diabetic patients. Diabetic patients do need to be checked well for circulatory status and some may face more pain than non diabetic patients with compression.

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Practice Innovation Abstracts

PI01

WOCing Around the Web: A Webpage to Guide the Bedside Nurse For Wound, Ostomy, and Continence Care.

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A new Wound, Ostomy, and Continence (WOC) team was developed at a 632-bed acute care Level II trauma hospital in the MidWest United States. With the development of this new team, it was discovered there was a lack of organization, location of, and general education regarding wound, ostomy, and continence resources for health care personnel, especially for the bedside nurse. There were no online resources for staff to easily access 24 hours/day, and there was a need for this knowledge gap to be addressed with online resources as opposed to printed material. Also, with the COVID19 pandemic, it was crucial for online resources to be available as in-person education is limited.
The purpose of this project was to develop an organized, up to date, and accessible webpage for wound, ostomy, and continence resources for the hospital.
The objective of this project was to provide bedside nurses with the tools needed to confidently perform wound/ostomy/continence assessment and treatment, as well as pressure injury prevention strategies.
The webpage continues to serve as a valuable resource for nurses, nursing support staff, and leadership team members. The webpage has increased staff awareness and general knowledge regarding pressure injury prevention, treatment and staging.

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PI02

Driving Hospital-Acquired Pressure Injuries (HAPIs) to Zero: A Quality Improvement Project

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Purpose**:** The purpose of this quality improvement (QI) project was to implement a collaborative, interdisciplinary team approach to reduce hospital-acquired pressure injuries (HAPIs) through nurse empowerment and engagement.
Participants and Setting**:** This QI project was done at a 288-bed community hospital located in Northeast USA. Participants included WOCNCB-certified nurses, staff nurses, nursing support staff, and nurse leaders.
Approach**:** The Donabedian model was used to design this QI intervention. A collaborative, interdisciplinary team approach was used as a driving force to educate staff, increase nurse engagement and empowerment, and ultimately reduce HAPI rates. Specific team-based interventions included: staff empowerment and engagement through continuing education, a shift from a primarily WOC Nurse-driven approach to an interdisciplinary and collaborative approach to wound care, and early recognition of COVID-related skin manifestations.
Outcomes**:** Improvement in HAPI rates from a peak of 5.30% in April 2019 down to zero from August 2019 to December 2020. There were a total of fifty staff nurse participants that engaged in continuing education with a 100% post-participation response rate and an increase in nursing skillset among staff nurses.
Implication for practice**:** Pressure injuries are key quality indicators for patient safety and avoidance of patient harm. Through an interdisciplinary team approach, which included nurse empowerment and engagement, pressure injuries were avoided resulting in improved quality care outcomes and maintenance of a safe patient environment.

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PI03

Cardiovascular & Thoracic ICU (CVTICU) Pressure Injury Reduction Project

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The hospital acquired pressure injury (HAPI) rate per 1000 patient days in our cardiovascular thoracic intensive care unit (CVTICU) in fiscal year 2019 was 11.16, and increased to 15.56 in fiscal year 2020.
This was a single site quality improvement project at a 16-bed CVTICU in a Magnet designated, Academic, Level 1 Trauma Center in the Southeastern United States. An inter-professional team convened to review HAPI numbers, identify HAPI causes, develop evidence-based strategies to meet our goal. The goal was to reduce sacral/coccyx and heel pressure injuries by 5% during our target measurement period from November 2020- June 2021 (Phase 1)
Using the A3 Thinking process, the team achieved a comprehensive plan:

- development of a pressure injury prevention bundle
- unit staff and provider education on Braden subscale scores
- completing the Braden score at the **end of shift**
- incorporation of skin risk in daily team rounds
- weekly WOC nurse rounds

Comparing our baseline measurement period and target measurement period, we had a 40% reduction in count of sacral/coccyx and heel pressure injuries. Based on statistical analysis done on the HAPI rates from FY20 and FY21, there is a 99.6% confidence (P=.004) that the interventions made an actual change, and the decrease is not due to random variation. It is important to have a comprehensive bundle that is supported by nursing and providers. We maintained consistency of care with skin interventions throughout COVID and its staffing challenges. There is increased knowledge of the Braden subscale score by the medical team, and it is now utilized to guide the plan of care during morning rounds. The WOC rounds have increased awareness of the WOC role, provided an opportunity for the nursing staff to ask questions and learn best practice techniques, and develop an improved inter-professional and collaborative practice with the CVTICU staff.

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PI04

Daily electronic health record (eHR) review to drive down pressure injury incidence rates

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At a 260-bed community hospital within a large health system, there was no process to obtain accurate hospital acquired pressure injury rates. Pressure injury prevalence studies were done four times a year, but incidence rates were not evaluated. A lack of data and awareness led to varied practices and outcomes. A multidisciplinary group consisting of members from admissions, information technology, quality and nursing convened to address this problem, obtain accurate and subsequently decrease baseline HAPI rate, increase awareness and feasibility of early interventions, and facilitate root cause analyses by frontline nurses of any stage hospital acquired pressure injury.
The multidisciplinary team's clinical innovation was to use real-time data from the health record to intervene early and obtain accurate incidence rates. HAPI rate, (percentage of people who developed a pressure injury after admission) is calculated by dividing the number of patients who developed an injury after admission by the total number of patients (on the unit or in facility) times 100. In order to obtain the numerator, a member of the quality team would pull a report from the eHR daily to see what flowsheets were entered for pressure injuries; if they were not marked as "present on admission", the chart was then reviewed by a WOC nurse to confirm details and stage. Next, a notification email was sent to the leaders of that unit if it was a true pressure injury acquired in-house; this led to a root cause analysis of a hospital acquired pressure injury, any stage.
Within 12 months of daily review with subsequent RCA, revealed a consistent downward trend; starting rate of 1.6 decreased to 0.5. In addition to the quantitative outcomes, there were also additional benefits from this program such as improved skin assessment and required documentation thereof and heightened nurse awareness of early intervention.

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PI05

Implementation of an Evidence-based, Content Validated, Standardized Support Surface Algorithm Tool in Home Health Care: A Quality Improvement Project

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For the approximately 3.4 million individuals receiving Medicare skilled home health care services, the prevalence rates for pressure injury extends upwards of 17% (CMS, 2021), with a cost to treat that can be more than twice that of prevention. According to the National Pressure Injury Advisory Panel, (NPIAP) 2019 International Guidelines; *A pressure injury is defined as localized damage to the skin and/or underlying tissue, as a result of pressure or pressure in combination with shear. Pressure injuries usually occur over a bony prominence but may also be related to a medical device or other object* (European Pressure Ulcer Advisory Panel, 2019). Although often under addressed by clinicians, minimizing pressure injury prevalence is paramount for home care companies especially with the implementation of Patient Driven Grouping Models (PDGM) in 2020. Despite the many pressure- reducing support surfaces available for home use, many barriers, including a general lack of knowledge around the types of support surfaces available, when and which surface should be recommended, and the subsequent reimbursement criteria for support surfaces (Ebi et al., 2019), continue to result in gaps for care when it comes to the prevention and/or treatment of pressure injuries. Home health care clinicians must identify and recommend the most appropriate support surface for the patient (McInnes et al., 2013). Our goal was to implement a process to ensure an appropriate support surface be part of the plan of care for patients identified as at risk of developing or already having a pressure injury. The implementation of a standardized validated support surface algorithm tool, was shown to be effective in improving patient outcomes, reducing days on service, and improving both clinician and patient satisfaction in home health care. This poster describes the development, testing, and outcomes associated with integration of this tool into our electronic medical record.

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PI06

Implementation of Hospital-Acquired Pressure Injury (HAPI) Preventative Bundle (HAPIPB): A Quality Improvement (QI) Project

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Topic - National Database of Nursing Quality Indicators (NDNQI) had estimated that the average HAPI costs about $50,000 to $150,000 per injury, and mortality increase by 12%. 2.5 million HAPI patients are treated in US healthcare facilities annually. 60,000 US Hospital Patients die each year from complications related to HAPI. 322,946 reported cases of CMS patients with HAPU/HAPI as secondary diagnosis each case. Average charge of $40,381/case.

Annual total cost of $13 billion. Variability / Case Mix / Level of Cares: 62% of HAPI are surgical patients, 76% ICU patients, 81% admitted patients. Centers for Medicare & Medicaid Services (CMS) no reimbursement for HAPI. Considerable fines & litigation for development of HAPI Patient safety, comfort, morbidity and mortality at risk.

Purpose - To investigate the reduction of pressure injury incidence and prevalence in the adult critical care or intensive care patient population environment and address any clinical knowledge gaps.

Objective - Does a HAPIPB assist in reducing HAPI rates in the adult critical care and/or intensive care patient population of a level one academic trauma medical center within a 5-week timeframe?

Outcomes - 3 confirmed HAPI cases prior to HAPIPB Implementation
• Post zero HAPI cases as monthly data extraction from 8th of Feb 2021, 8th of January 2021, & 8th of December 2020. 1120 Chart Audited in eight weeks
• (Indicator 1): 42.3% increase in documentation of skin monitoring.
• (Indicator 2): 69.9% increase in positioning documentation.
• (Indicator 3): 88.9% increase of nursing staff documenting upon admission.
Z scores of each behavior as follows -15.201, - 19.723, and -22.271 is less than the standard alpha & Asymp. Sig (2-tailed) less than 0.05 which conclude a difference between two sets of data are statistically significant.

Positive clinical behavior changes factored into the overall reduction of HAPI rates. Pilot unit had 3 HAPI case reported in November 2020. After HAPIPB; follow up data extraction zero HAPI cases as of December 2020, January 2021, & February 2021. These findings support the HAPIPB on reducing HAPI rates in the adult inpatient critical/intensive care unit.

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PI07

Laser Focused: Decreasing Hospital Acquired Pressure Injury Utilizing Long Wave Infrared Thermography

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Topic: Decreasing hospital acquired pressure injury (HAPI) rates in medical intensive care unit (MICU) that had 24 HAPI's in 2018, the highest rates within the Integrated Delivery Network (IDN) system in South Eastern Florida. These rates existed despite a robust pressure injury (PI) prevention protocol.
Purpose: A nurse driven quality improvement (QI) team initiated an evaluation using long wave infrared thermography (LWIT) to identify patients who presented with visible/non-visible signs and symptoms of deep tissue pressure injury (DTPI) as evidenced by a quantifiable temperature anomaly of <> 1.2 degrees Celsius on a relative scale.
Objective: The objective of the evaluation was to utilize innovative technology in addition to the facility approved skin assessment to decrease HAPI rates and improve patient outcomes. LWIT was used to scan the intact skin of the sacrum and bilateral heels, areas of visible skin

discoloration, and/or areas of concern located over a bony prominence. Images were taken upon the admission assessment, analyzed by unit nurses, and temperature anomalies congruent with signs and symptoms of DTPI documented in the Electronic Medical Record (EMR).
Outcomes: LWIT QI project started April of 2019. By November 1, 2020 (19 months later), HAPI rates had decreased 85% in comparison to April of 2018. Cost-effectiveness of the pilot potentially saved the IDN over $350,000. The QI project transitioned from pilot to policy in every nursing unit of the four hospital IDN system.

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PI08

Improving Pressure INjury Awareness in the Emergency Department

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Increasing Pressure Injury Awareness in the Emergency Department
The purpose of this quality improvement project is to expand the current inpatient pressure injury prevention protocol to include the emergency department; with a focus on adult patients 80 and older admitted to a medical-surgical unit, and to increase pressure injury (PI) knowledge amongst the ED registered nursing team.
The objectives of the project are:

- Implement the pressure injury (PI) prevention bundle (skin assessment, application of a bordered foam dressing on the sacrum as a preventative dressing, WOC nurse consult for patients identified with a PI)
- Educate the ED Registered Nurses (RNS) on the PI prevention bundle and PI prevention, classification, and identification of PI
- Reduce PI incidence in adult patients 80 and older who are admitted to a general medical-surgical unit via the ED
- Outcomes: Pressure injury incidence decreased by 53.8% in adult patients 80 and older by 50% with $p = 0.036$.
- Pre and post-test mean scores were statistically significant with $p = 0.01$.

The process remains in place. The pressure injury cumulative incidence rate for FY 21 is 0.2136. The incidence is garnered from staff identification and reporting of PI in the studied population (80 and over admitted through the ED to a medical surgical unit). The rate calculation is as follows: Nine PIs in study population /patient days on all medical surgical unit (9/42,134 x 1000 = 0.2136).

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PI09

WOCTok: A Video-focused Method to Engage the Frontline Staff in WOC Issues

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Topic: Constant changes in health care challenge WOC nurses to meet staff education needs. Limited time, staff fatigue, staffing shortages, as well as disinterest, particularly during a pandemic, need to be addressed in order to create impactful teaching moments. Facilitating, creating, developing and producing clever educational short-form videos, we transfer knowledge to our staff in less than 3 minutes and increase awareness of guidelines and skin integrity issues.
Purpose: The WOCTok series was created to transform our team's process, product and audience for wound, ostomy and continence education, ultimately engaging clinicians with technology and storytelling.
Objective: The objective of a WOCTok is to provide easily accessible education on WOC issues that ignite conversation. To achieve this, monthly we:

1. Review HAPI data and reasons for consults to identify trends or issues.
2. Select a topic based on an issue, inquiry or guideline.
3. Develop a script, recruit "actors", film the story and produce a video.
4. Publish and distribute a synopsis of the WOCTok and video link within a newsletter to all employees.
5. Publish the WOCTok on the system's SafeTv intranet.
6. Email the WOCTok link to nursing leadership to view during staff meetings and huddles.

Outcomes: Changing the process, product and audience of our education has encouraged conversation about wounds among critical care, medical-surgical, operating room, home care, and outpatient nurses, as well as nursing students, dietary, rehab medicine and surgery. All of these team members have participated in WOCToks. Preceptors use these videos during unit orientation and the Department of Nursing shows some during nursing orientation. Although the number of views on SafeTv is in the hundreds, it doesn't tally each unique viewer.

WOCToks have fostered a lighthearted community approach to transferring wound, ostomy and continence knowledge to our staff in minutes.

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PI10

Transformational Leadership and Accountability Driving Pressure Injury Outcomes in a Critical Care Unit (CCU)Introduction

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TOPIC
Critical Care Units traditionally have the highest prevalence of HAPI with rates as high as 29.5%.
PURPOSE
The purpose of this 10 month quality improvement project was to reduce hospital-acquired pressure injury rates at a 284-bed Magnet-designated hospital in the Northeast United States.
OBJECTIVES
HAPI prevalence data identified the CCU as a high incidence unit. Customized education was provided. Gaps in the prevention bundle were filled with evidence based products. Outcomes were measured, trended, and reassessed.
OUTCOMES
The Pressure Injury Prevention Program resulted in 82.5% reduction in HAPI, $1,436,622.00 in treatment costs avoided, 264 unnecessary length of stay days totaling $764,016.00 in hospital expenses avoided. The total cost savings minus product cost and staffing costs was $1,268,815.00.This project demonstrates that an investment in evidence-based prevention can yield significant clinical and financial benefits.

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PI11

Implementation of an Ostomy Care Pathway for Patients with a Stoma After Colorectal Surgery

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Topic: Dehydration related to high output stoma and peristomal skin complications were identified as major causes of hospital readmissions at a large colorectal surgery clinic. A quality improvement project to enhance the care of patients with an ostomy was developed and implemented.
Purpose: To determine if a standardized pathway that included: pre-op education and marking with a certified ostomy care nurse (COCN), a treatment algorithm to manage high output (HO) and a quality of life (QoL) questionnaire improved patient outcomes and decreased readmissions.
Objectives: The primary objective of this project was to identify if a comprehensive ostomy care pathway for patients with a new stoma decreased peristomal skin irritation, dehydration, and hospital readmissions. The investigator also wanted to evaluate quality of life concerns among patients with a stoma.
Outcomes: 15 patients were included and compared in this project, (n=8) in the pre-pathway group and (n=7) post-pathway implementation. The most common cause for stoma performance was rectal cancer 80% (n=12). Seven of 15 (46.7%) patients had ileostomies while the remaining eight (53.3%) had permanent colostomies. Patients who followed the ostomy pathway experienced fewer readmissions than did patients in the historical control group (0% vs 50%). Dehydration due to high output and peristomal dermatitis were the most common causes of readmission. The QoL scores ranged from 27 to 69 with an average of 46.6, resulting in a low QoL in this patient group.

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PI12

TOTAL QUALITY MANAGEMENT FROM THE LENS OF NURSING PRIVATE PRACTICE ON WOUND OSTOMY CONTINENCE IN INDONESIA: A QUALITATIVE STUDY

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Background: In Indonesia's professional nursing practice on wound ostomy continence, management quality has been a problem and a major challenge in the last decade. As a center of excellence for nursing private practice services, total quality management could identify a health organization system's performance to increase patient satisfaction and patient safety.
Purpose: The goal of this study is to look at how total quality management (TQM) affects professional performance in nursing private practice on wound ostomy continence in Indonesia.
Methods: This is a qualitative study involving six CEOs of nursing private practices as respondents. The data was analyzed using NVIVO, which included an interview.
Results: The quality of wound ostomy continence services is complex, and each person can judge it from many perspectives depending on their background and interests. The guideline as a reference is the core element of the supply of health services, namely to meet the needs and desires of service users (patients) for health services, in order to overcome inequalities in dimensions of the quality of health services (health needs and demands). The study's key findings are the relationships and influences on professionalism across TQM components such as leadership, strategic planning, customer focus, measurement analysis, knowledge management, staff focus, and process management. In nursing private practice, leadership performance outcomes.
Conclusion: TQM improves an organization's wound ostomy continence practice performance and serves as a strategic aspect in evaluating and implementing sustainability improvement.
Keywords: TQM; Continuous quality improvement; Nursing Private Practice, WOCN

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PI13

Neonatal/Pediatric Tracheostomy Pressure Injuries: A Thing of The Past

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Topic
The neonatal and pediatric populations are susceptible to pressure injury formation (Marufu, 2021). Regarding medical devices, this is the main contributor to pressure injuries in this population (Chamblee et al., 2018). More particularly, tracheostomy devices can cause pressure injury formation, especially in the immediate post-operative period (Sullivan et al., 2020).
Purpose
The facility is a 266 bed, freestanding pediatric academic hospital, with a 94 bed NICU and 47 bed ICU, level 1 trauma, and level IV NICU designation. We included ages 0-18 years of age. There were approximately one tracheostomy formation every two weeks: June 2019-May 2020, 24 new tracheostomies, and June 2020-May 2021, 30 new tracheostomies. The rate of pressure injury formation for the period June 2019- May 2020 was 3/24, or 12.5%. Using a soft silicone antimicrobial foam transfer dressing under the tracheostomy site of pediatric and neonatal patients has prevented the formation of tracheostomy-related pressure injuries.
Process
In June 2020, there was a discussion with the pediatric ENT surgeon about products sutured in place for the initial post-operative week of new tracheostomy patients. Products used included: gauze, soft silicone thin foam dressing, soft silicone absorbent foam dressing, soft silicone antimicrobial absorbent foam dressing, and absorbent foam dressing. No standardized product was used. The soft silicone antimicrobial foam transfer dressing review included the length of wear-time, mechanism of action, and cost versus benefit. In June of 2020, the pediatric ENT surgeon sutured the soft silicone antimicrobial foam transfer dressing through the tracheostomy phalanges while in the operating room with all new tracheostomy patients.
Outcomes
Following the incorporation of the soft silicone antimicrobial foam transfer dressing, the pressure injury rate for tracheostomy sites was zero for June 2020- May 2021. The tracheostomy pressure injury rate remains zero to this date.

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PI14

Interprofessional Academic-Service Learning Project: Sustainable Foot and Wound Care Clinic

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Topic
Foot and Wound Care Clinic for Homeless:
Interprofessional Academic Service-Learning Project
Purpose / Aims:
The purpose of the development and delivery of this project was to bring awareness of the unique needs of the homeless of Alaska, while fostering empathy among college of health students.

- To bring awareness of the unique needs of the homeless in Alaska.
- Provide Inter-Professional Academic Service-Learning for Medical, Nurse Practitioner, Nursing, and Social Work students at the universities.

Objective/s:
Describe an opportunity to offer care to an underserved vulnerable population.
Describe the implications of conducting an interprofessional service-learning experience in relation to the delivery of health care curriculum.
Describe the value of interprofessional education to enhance collaboration, communication, and civility in the future practice as a health care provider.
Outcomes:
The original team were made up of medical, nursing, nurse practitioner, and social worker students, and faculty. Later public health nurses and doctors, faith-based and retired nurses with mental health background and volunteers joined the efforts to meet the foot and wound care and mental health needs. Six medical, two nurse practitioner, two baccalaureate students, and three community partners enrolled in the foot and wound care course for board certification. Others completed the Wound Treatment Associate Course. Physical and mental health care has been provided for over 100 homeless individuals in two settings. The major reflection from students was the opportunity to learn how to listen. This project identified the need for a comprehensive primary clinic and is now developing a strategic plan to expand the foot care clinic into a student-led primary care clinic supervised by nursing faculty and community health providers to include mental health, substance abuse counseling, women's health, and chronic disease management.

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PI15

The Introduction of Hi-5 Components on Diabetic Foot Ulcers Management at The Community Level

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Topic. Diabetic foot ulcers (DFU) are associated with significant morbidity and mortality and can subsequently lead to hospitalization and lower limb amputation if not recognized and treated promptly. Multidisciplinary programs of strategy that focus on prevention, education, regular foot examinations, aggressive intervention, and optimal use of therapeutic footwear have demonstrated significant reductions in the incidence of lower-extremity amputations.
Purpose. The direction to wound clinician how to manage used Hi-5 components of DFU management for a patient with complicated wound diabetes at the community level at private nursing practice by home visit and using telemedicine with a wound care expert.
Objectives. The setting and patient population targeted by studies are from the outpatient clinic and home care setting (15 case studies). Followed by palliative care (3 studies) and out patients' clinics (6 studies), rehabilitation care (2 studies) and four studies that targeted multiple care settings (hospital and home care setting). The most common types of wound addressed were chronic wounds: DFU. Introduce assessment of DFU based on infection severity, and the implementation used the Hi- 5 components of DFU management (wound dressing; education;nutrition; physical activity and palliative care) that help wound clinicians achieve a quality of care and patient safety.
Outcomes. These studies present positive reports on clinician satisfaction with telemedicine and increased efficiency. The DFU management pathway must be a central part of planning how the telemedicine solution should be integrated into the current clinical practice. Managing DFU in post COVID-19 era is challenging. Integrating telemedicine into wound care plays an essential role in managing DFU management. The pathway of DFU and the management using Hi-5 as the most straightforward monitoring from wound expert to the team. The community referral system will optimize the quality of continuum care and reduce amputation.
Keywords: *Telemedicine; Assessment of DFU; Hi-5 Components of DFU*

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PI16

Don't Leave Your Patients in S.H.A.M.B.L.E.S

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Topic
Hospital Acquired Pressure Injuries (HAPIs) affect approximately 2.5 million people annually in the U.S. with costs per instance as high as $70,000. Many payers do not cover the costs if incurred as the result of hospitalization.
Purpose
The cost to healthcare, but most importantly, the cost to patients through the effect on mortality and quality of life make prevention of HAPIs imperative (Vitale & Dzioba, 2021).

Objectives
A collaborative effort between the Wound, Ostomy, and Continence (WOC) nurses and Clinical Education nurses at a 595-bed community hospital led to the development of the SHAMBLES program to decrease HAPIs. The catch phrase of 'Don't leave your patients in S.H.A.M.B.L.E.S' was the centerpiece of a collaborative effort of nurses from the clinical education department and the wound care team. Nursing professional development specialists (NPDs) and Certified Wound, Ostomy and Continence nurses rounded on inpatient units with varying weekly plans targeting different concepts and interventions for HAPI prevention. The major focus centered on the acronym, SHAMBLES - S(sacrum) H(heels) A(appliances/devices) M(moisture) B(bony prominences) L(linen layers) E(edema) S(sweep the bed for debris) and the implementation of offloading teams.

Outcome
HAPI prevention improved on several units as well as compliance with turning and repositioning for patients who met the criteria for the offloading teams. The program continues to roll out on additional units throughout the organization.

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PI17

Mobile Wound Care Skills Fair with Woundie and Stomie: An Innovative Approach to Increasing Staff Competencies and Engagement in Wound and Ostomy Care

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Purpose: The purpose of this quality improvement (QI) project was to design and implement an innovative, participatory approach to the education and training of staff nurses while enhancing staff engagement.
Participants and Setting: The project was implemented in one intensive care unit and six adult medical-surgical units of a 288-bed community hospital in Northeast USA. Participants included registered nurses and nursing support staff working in intensive care and medical-surgical units.
Approach: The Plan-Do-Study-Act (PDSA) model was used as a framework for this QI intervention. An innovative, peer-to-peer approach, led by WOCNCB-certified nurse leaders, was utilized to increase the knowledge and competencies of clinical nurses as it pertains to wound and ostomy care. The intervention included a staff-nurse driven peer-to-peer mobile wound care skills fair, using innovative anthropomorphic carts named Woundie and Stomie.
Outcomes: The QI project showed a 68% knowledge retention among participants; 85% reported a high level of engagement, and 97.5% reported a high level of satisfaction five months after project implementation.
Implications for Practice: There is an emerging need for educational innovation regarding wound and ostomy care to improve quality of care, nursing care outcomes, and engagement.

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REDUCING NEW AND WORSENING PRESSURE INJURIES UTILIZING AN INTERFACE SENSOR MONITORING SYSTEM

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1. REDUCING NEW AND WORSENING PRESSURE INJURIES UTILIZING AN INTERFACE SENSOR MONITORING SYSTEM
2. The purpose of this quality improvement project was to evaluate whether an interface Patient Monitoring Sensor, which prompts frontline staff to consistently and effectively turn and reposition high risk patients, would prevent new or worsening truncal pressure injuries in a Long Term Acute Care Hospital (LTACH).
3. A multidisciplinary team of RNs, CNAs, NPs wound care certified, nurse educators, nursing leadership and patient safety risk management met to review the nosocomial pressure injury data and the interventions that were implemented over the past two years. We segregated truncal from extremity pressure injuries, new or worsening, on the LTACH, an 18 bed specialty hospital with medically complex patient population that includes ventilator weaning.
Education on sensor application, criteria for the identified targeted population, and effective turning and off-loading using various positioning devices was provided. The 12-week trial yielded optimal results, and a decision was made to move forward with the Sensor Monitoring System as standardized practice on the unit.
4. During the 12-week trial, there was one buttock DTI that healed within five days. There were no other new or worsening trunk pressure injuries.
To date (230 days), there have been zero new or worsening pressure injuries for patients placed on a sensor. There were, however, two patients who developed DTIs who were not attached to a sensor, which further strengthens the position that the sensor system aides in the prevention of new or worsening pressure truncal pressure injuries.
Additionally, a spirit of camaraderie among the staff was enhanced during the trial. Staff assisted one another in turning and repositioning patients and there was even a friendly competition between the day and night staff. This was an unexpected observation during the trial.

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PI19

Taking an Innovative Product to Market: Pressure-Sensor Integrated Smart Device for Improving Adherence to Offloading Diabetic Foot Ulcers

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Purpose

An Engineering researcher was seeking a clinician to identify a patient need that could be addressed utilizing smart sensors in development.

Diabetes affects 34.2 million Americans, or 10.5 % of the population. Diabetic foot ulcers (DFU) are a major complication of diabetes, with yearly incidence ranging from 2-6%.[1] Approximately half of all DFU occur on the plantar surface.[1] The cornerstone of treatment involves measures to offload pressure to those areas.[1,2] Patient adherence to offloading recommendations has been measured as low as 2.2% overall,[2] to 28% with removable devices.[3] A systematic review by clinical leaders recommended that "ways to improve adherence and to encourage patients to adhere should receive immediate attention from clinicians and researchers".[4]

Objectives

A partnership was formed, and proposal submitted through the Coulter Program (CP) to develop a smart sensor providing feedback to patients and clinicians regarding offloading effectiveness as a critical component of DFU management. The CP provides proof-of-concept funding to facilitate product development through research translation from benchtop to bedside.

Outcomes

The Team was selected to participate in a boot-camp providing education and guidance from subject matter experts to clarify the unmet clinical need and articulate a viable business opportunity. Following a series of "shark tank" like presentations to an external Committee, the project was selected as a recipient of a $100,000 Coulter grant. Communication with potential business partners has sparked interest in commercialization of the project for a variety of applications. A utility patent has been filed. The prototype sensor paired with a mobile phone application developed to provide real-time feedback and track data has been beta-tested and will be evaluated on healthy volunteers through the academic center wound clinic. A highlighted review of the process will provide insight to clinicians with ideas for similar products to positively impact patients.

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PI20

Management of Complex Enterocutaneous Fistulas in a Pediatric Patient with Omphalocele-Exstrophy-Imperforate Anus-Spinal Complex

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Topic: Design a customized pouching technique for a 2- month old male for improved management of complex enterocutaneous fistulas.
Purpose: The infant had a history of Omphalocele-Exstrophy-Imperforate anus-Spinal complex (OEIS). The OEIS complex comprises a combination of malformations including omphalocele, a defect in the abdominal wall resulting in abdominal contents, including intestines and liver, protruding through a defect and covered by a thin membrane. The cecum and bladder are everted and the lumens are exposed. In boys, the penis is flat and short, with exposed inner surface of the urethra on top. The penis is split into right and left halves. This represents the most severe manifestation spectrum of birth defects. The OEIS complex affects 1 in 200,000 to 400,000. The baby underwent repair of the cloacal exstrophy including tubularization of the cecal plate, omphalocele repair with bridging mesh closure and colostomy. The post-operative course was complicated by compartment syndrome and multiple enterocutaneous fistulas with skin maceration and excoriation.
Objective: Identify an effective method to control effluent to protect the wound bed from corrosive effects of bowel contents allowing the surrounding wound bed to develop granulation tissue and heal. The surgical team and stakeholders reached consensus to use a tubular silicone ring around the multiple fistulas. The barrier ring was placed at the base of the fistula with placement of a moldable pouch and barrier strips sealing the edges to contain the output and protect the underlying skin.
Process/ Replication and Outcomes: This containment method was effective in managing effluent, allowing the omphalocele repair to heal, decreased application time by 45 minutes from previous techniques and provided a pouching system wear time of 4-5 days. This pouching system allowed customization for patients with complex enterocutaneous fistula(s) to protect the surrounding skin, measure effluent accurately and achieve adequate wear time.

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PI21

Innovative Infant Refeeding System

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Topic/Significance: Mucous fistula stool refeeds (antegrade enemas) promote weight gain, absorption of nutrients, and help to maintain function of distal bowel in infants who have

undergone small bowel resection. Refeeding introduces many challenges to maintaining skin integrity and establishing successful ostomy pouching system.
Purpose/Objectives: Develop a refeed ostomy pouching system to accommodate for catheter placement in mucous fistula, easily collect effluent for maximum volume refeeds, and maintain skin integrity underneath ostomy barrier.
Process: A catheter is placed into the mucous fistula after completion of fistulogram to verify patency. Using a two-piece ostomy pouching system, the catheter is maintained in mucous fistula and pulled out of ostomy pouch through added air-release venting device. A separate silicone catheter is inserted through drainable end of pouch and held in place with moldable ostomy paste. The paste also functions to seal the opening of the pouch and prevent leaking of effluent through bottom of pouch. The silicone catheter is then connected to low continuous suction to collect effluent.
Outcomes: The suction pouching system allowed for easy access and securement of catheter in mucous fistula, as well as accurate and clean collection of effluent by nursing staff with minimal agitation and unnecessary waking of infants. Pouch leaking was minimal during refeeds, decreasing pouch change frequency and maintaining skin integrity, while allowing for successful refeeding and the health benefits that come with it.

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PI22

Transforming Leadership for WOC Nurses: Building Your Opportunities.

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1. Topic: Transformational Leadership "A process through which leaders and followers raise one and another to higher levels of morality and motivation." (Iqbal, K. et al. p.263).**2. Purpose:** At more than 3 million in number, nurses make up the single largest segment of the health care work force. They also spend the greatest amount of time in delivering patient care as a profession. Nurses therefore have valuable insights and unique abilities to contribute as partners with other health care professionals in improving the quality and safety of care. Strong leadership is critical if the vision of a transformed health care system is to be realized. To play an active role in achieving this vision, the nursing profession must produce leaders throughout the system, from the bedside to the boardroom*. (IOM, 2010).* Wound, Ostomy & Continence (WOC) nurses should be engaged in this work and participate in leadership development within their specialty, however the WOC literature on development of nursing leadership skills is lacking. The purpose of this work is to provide WOC nurses with inspiration and rationale for prioritizing leadership within their practice and providing resources to develop leadership skills. **3. Objectives:** 1.) Define Transformational Leadership 2.) Describe why transformational leadership is an effective leadership style 3.)State three resources for WOC nurses to utilize to further develop leadership skills **4. Outcomes:** WOC Nurses who engage in transformational leadership skill development and implementation will be prepared to actualize the production of nursing leaders throughout the system, from the bedside to the boardroom. This will improve the quality of care delivered to WOC patients across the continuum and enhance WOC role satisfaction.

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PI23

WOC Nurse Pathway to Certification: A Novel Approach to Address Workforce Challenges

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Topic:
Evaluating the certified WOC nurse workforce is a recommended component of a pressure injury program. A reliable WOC nursing pipeline can help achieve quality patient outcomes including lower hospital acquired pressure injury and readmission rates. Analysis within a large, state-wide health care system revealed WOC nurse vacancies across multiple hospitals as well as underutilized educational resources available through the local WOC Nursing Education Program (WOCNEP). Challenges existed with traditional talent acquisition due to the highly specialized workforce resulting in longer than average recruitment times. Additional structural barriers included lack of reimbursement opportunities and no formal recruitment pathway.
Purpose:
A WOC nurse pathway was developed to fill current vacancies using a centralized funding mechanism. The pathway aligned to hospital strategic goals for developing a stable workforce and enhancing academic partnerships, in addition to the ANCC Magnet™ structural empowerment standard.
Objectives:
A partnership with the local WOCNEP was formed. The healthcare system received discounted tuition for up to five pathway sponsorships in exchange for the development of a new educational module. A standard operating procedure was developed outlining the eligibility criteria, pathway and sponsorship process, and clinical requirements. The eligible nurse clinician transfers directly into the WOC department while completing WOCNEP requirements and is promoted to a WOC nurse upon successful program completion and passing of the WOCNCB™ exams. Targeted competencies were created for the nurse clinician role. Clinical hours are spent in a variety of settings within the hospital system to ensure a diverse experience.
Outcomes:
The first pathway participant started in November 2021 and is expected to finish in summer 2022. An operational dashboard will measure outcomes related to pathway completion rates and timeframes, WOC nurse engagement, contract labor usage, overtime hours, and vacancy rates.

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PI24

An Effective Alternative to Crusting

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Topic
Peristomal MASD (Moisture-Associated Skin Damage) causes significant discomfort and emotional distress in patients with ostomies. Methods to treat peristomal MASD differ between practitioners, but "crusting" is by far the most common, and recommended in current literature as well as taught in certification courses. This method can be difficult to perform and ineffective leading to more skin breakdown.
Purpose
The accepted method of treating the skin damage caused by peristomal MASD is the use of the "crusting technique". This technique is described as using skin barrier powder on the denuded weeping skin and brushing the excess off, then dabbing with a liquid skin protectant to effectively "seal" the powder in. I have found this technique rarely successful and difficult to teach new ostomates, and new nurses, resulting in more leaking and more peristomal MASD, contributing to increased emotional distress.
Objectives
To resolve peristomal MASD without using the difficult and often ineffective technique of "crusting", and thereby decreasing discomfort and emotional distress of the ostomate.
Outcomes
Crusting technique is an often ineffective and confusing technique resulting in increased peristomal MASD. The use of a hydrocolloid based protective skin barrier wafer placed directly over the area of MASD along with the correct pouching system is an effective way to resolve the peristomal MASD and leaking, decreasing discomfort and emotional distress.

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PI25

Active Skin Surveillance to Reduce Medical Device-Related Pressure Injuries

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Medical device -related pressure injuries (MDRPI) result from devices utilized for diagnostic or therapeutic purposes. Pediatric patients are at particular risk for MDRPI's due to their anatomy, immaturity, and inability to respond meaningfully to increased pressure. Previous prevention practices included routine head to toe skin assessment and a quarterly pressure injury prevention audit.

An increase in hospital acquired pressure injuries (HAPI's) prompted development of an action plan for prevention. A key driver diagram and SWOT (strengths, weaknesses, opportunities and Threats) analysis were utilized. It was noted that a majority of the HAPI events were respiratory device -related.

A project team joined the Solutions for Patient Safety (SPS) HAPI quality group. Children's hospitals across the nation participated in an 8 month project sharing evidence-based best practices. One practice not previously utilized was active skin surveillance, which was then implemented in two community pediatric intensive care (PICU) units.

WOC nurses, Respiratory Therapists (RT), and Quality Specialists came together at a consistent weekly time to assess the patient with the bedside RN and family. Skin assessment under respiratory masks and around endotracheal tubes was a primary focus. Ensuring proper padding, device rotation, and recognition of underling edema was essential. The Plan Do Study Act (PDSA) methodology was utilized. Education of bedside nurses and RT staff with use of K-cards and follow-up quality meetings were completed.

The system all harm rate was reduced from 1.16 to 0.85/1000 patient days with a goal of 0.46/1000 patient days. One PICU decreased their rate from 5.4 to 1.4/1000 patient days while the other unit celebrated success by decreasing their rate from 6.8/1000 patient days to zero.

Active surveillance allows a more focused, multidisciplinary, weekly, skin assessment that ensures early intervention. Increasing partnership with RT was key to this implementation and success.

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PI26

Innovating Pressure Injury Prevention and Practice in a Time of Crisis

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Topic
Pressure injuries cost healthcare organizations billions of dollars annually in unnecessary treatment cost, increased length of stay, reimbursement penalties, increased readmission rates, and litigation.[1-2]For our hospital, the COVID pandemic presented a number of challenges that interrupted our normal focus on pressure injury prevention, resulting in an increase in hospital-acquired pressure injuries. As a result, we were charged with resetting our pressure injury prevention program to reduce our hospital-wide pressure injury rates.
Purpose
The purpose of this project was to reduce hospital-acquired pressure injuries across our 1,134 bed Magnet-designated, acute care teaching hospital.
Objectives
This was a 5 month practice improvement project. We started by assessing our current state of practice. Root causes identified were deprioritization of skin, high turnover, and a paucity of training. We crafted an action plan that addressed each of these gaps. To reprioritize skin, we initiated regular rounding and bedside coaching to create awareness and accountability. We addressed the knowledge gaps created by high turn-over and a paucity of training through a pressure injury prevention one-pager with QR code access to training videos, followed by a product fair.
Outcomes
Since inception, fifteen of thirty four units have achieved a reduction in HAPI incidence, including all three of our high focus units. Four units have sustained zero HAPI incidence. We have not had any stage 4 pressure injuries and an 85% reduction in stage 3 pressure injuries (20 to 3) Our hospital-wide HAPIs have reduced 51.6% (from 122 in April to 59 in August), resulting in $1,371,321.00 in avoided costs.
This current work shows that a refocus on innovation, best practice and strategic implementation of solutions that address root causes can help a healthcare organization achieve their HAPI reduction goals, alleviating unnecessary patient harm.

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PI27

Implementation of a Skin Health Procedures to Reduce the Incidence of Hospital Acquired Pressure Injuries (HAPI)

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Topics/Significance to Practice: HAPIs are one of the most common but, preventable hospital associated complications.[1] HAPIs occur in 3 to 34% of patients admitted in the hospital worldwide and it consequently leads to longer hospital stays, increased morbidity, and decreased overall quality of life.[2] HAPIs effect approximately 2.5 million patients in the United States annually at a cost of approximately $26.8 million.[3] Implementation of standardized programs, risk assessment, and HAPI prevention has been to shown to reduce the occurrences of HAPIs.[1,4] We report on the incidence of HAPIs before and after implementation of evidence-based skin health procedures.
Purpose of the innovation/objectives: To evaluate the incidence of hospital acquired pressure injuries (HAPI) before and after implementation of skin health procedures (SHP) which included a comprehensive prevention system of products.
Process/replication: The SHP included staff training, hospital practice, and skin care products during a nine month implementation time period from January to September, 2021.

The hospital in-patient HAPI data were collected during SHP implementation (post-SHP). The hospital in-patient HAPI data were then compared to the previous year (January to September, 2020) before SHP implementation (pre-SHP)
Outcomes: During the two nine month periods, a total of 8,643 inpatient days were evaluated pre-SHP and 8,771 inpatient days were evaluated post-SHP. A total of 39 HAPIs were observed pre-SHP and 17 HAPIs were observed post-SHP. The incidence of HAPIs per 1000 inpatient days per month was 4.51 and 1.94 pre-SHP and post-SHP, respectively. This represented a 56.4% decline in the total number of HAPIs and a 57.1% decline in the rate of HAPIs when comparing pre-SHP to post-SHP implementation.
Conclusions/Implications for Practice: We conclude from this nine month hospital study, that implementation of evidence-based skin health procedures can reduce the occurrence of hospital acquired pressure injuries (HAPI) and improve overall patient care.

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PI28

"Speedy Rounds" in the Intensive Care Unit: A Quick and Effective Approach to Reducing MDRPIs Associated with Advanced Airways

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Topic
Nationally, medical device related pressure injuries (MDRPIs) account for more than 30% of all hospital-acquired pressure injuries. Assessing prevalence rates within individual institutions and developing targeted interventions is necessary to reduce and maintain lower rates. Wound Ostomy and Continence nurses (WOC) are well positioned to lead this work in collaboration with other disciplines.
Purpose
To reduce MDRPIs from respiratory devices in the acute care setting. Endotracheal tube securement devices were associated with high rates of pressure injuries at our institution, and the focus of our practice innovation, "Speedy Rounds". The authors developed "Speedy Rounds": a quick assessment, together by RN/RT, of the skin and mucosal tissue associated with advanced airway securement devices of all intubated patients, every shift. "Speedy Rounds" promoted early recognition of skin at risk and pressure injury development allowing for early implementation of interventions to reduce or lessen severity of associated MDRPI.
Objectives
Promote early implementation of preventative interventions associated with respiratory devices.
Enhance collaboration and communication between RT/WOC RNs/staff RNs to prevent pressure injuries resulting from respiratory devices.

Increase nursing (RN) and respiratory therapy (RT) staff's knowledge aimed at preventing respiratory device related MDRPIs.
Improve skin assessment, the identification of impaired skin, and documentation related to advanced airways.
Outcomes
"Speedy Rounds" reduced MDRPIs related to respiratory devices. "Speedy Rounds" increased RN/RT engagement resulting in improved collaboration, communication and shared ownership of practice. "Speedy Rounds" improved RN/RT assessment, documentation and implementation of early interventions as noted and captured by an electronic data collection tool. "Speedy Rounds" demonstrated a sustained reduction in MDRPI rates related to endotracheal securement devices as reflected in quarterly skin prevalence data and a reduction in associated Serious Reportable Events (SREs).

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PI29

Implementing an evidence-based approach to product and practice standardization

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Topic:
Product alignment with pressure injury protocols can impact quality and safety outcomes and finances. Analysis within a large, state-wide health care system found numerous products available for the same nursing procedures, for example: eight different hydrocolloid dressing products in use. Variation in products and practice are contributing factors to hospital acquired pressure injuries (HAPI), inconsistent protocol adherence, and excess cost.
Purpose:
A project was initiated to standardize products and align nursing practice protocols across multiple hospitals and clinics using evidence-based practice (EBP) guidelines. Any net cost-savings could be used to enhance other areas of the system's WOC nursing program.
Objectives:
An interdisciplinary team of quality leaders, nursing leaders, and system WOC nurses agreed to prioritize a new product standardization process. Structured processes are considered best practices to evaluate wound care products. A comparison analysis was created using formulary lists, cost and usage data, EBP guidelines, and current system protocols. Guiding principles, process scope, and a product evaluation plan was determined. Scoring criteria was defined by the guiding principles and EBP guidelines. A quality function deployment tool was utilized to rank product categories and differentiate high and low scores. Meetings were conducted to review evidence and current practice, share feedback, and narrow product selections. After product trials were conducted, delegate members voted on final product recommendations, standard practice, and protocol changes.
Outcomes:
Two product evaluations were completed within six months. On average, duplicate products were reduced by 56.3% and vendor variation reduced by 66.7%. Projected cost analysis indicated a cost savings in one category and small increase in the other category. Long term impact to overall system savings, protocol adherence, and reduction in HAPI rates will be

measured. Based on demonstrated success, the project will continue until all categories and protocols are standardized.

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PI30

Autonomy and improved patient outcomes: How use of a Synthetic hybrid-scale fiber matrix by bedside WOC Nurses may lead to decreased healing times and patient length of stay

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Topic/Significance to Practice: Synthetic hybrid-scale fiber matrix (SHSFM) are traditionally applied and managed by physicians in the OR and clinic areas. This practice leaves out patients in the general in-patient setting who are often routinely plagued by chronic or slow to heal wounds that are managed by very skilled and experienced WOC Nurses. Underutilization of progressive and advanced wound therapies can potentially delay healing and predispose patients to ongoing pain, risk for infection, prolonged hospital stays/readmissions and invasive surgeries. Many of these skin substitutes are able to be initiated, placed and monitored by WOC Nurses. By collaborating with physician colleagues, WOC Nurses can expand their practice, utilize their expertise in evidenced based wound healing, and greatly improve patients healing outcomes.
Purpose of Innovation/Objectives: To improve wound outcomes and decrease length of stay for patients with chronic and/or hard to heal wounds
Process/Replication: SHSFM education provided by manufacturer clinical specialists. Collaboration instituted between WOC nurses, management and provider colleagues to allow WOC team to initiate, apply and monitor treatment independently. WOC nurse determines at time of assessment appropriateness of applying skin substitute as part of the treatment plan. Discusses initial application of product with primary provider team for adequate billing and reimbursement.
Outcomes: In August 2021, SHSFM applied to 3 patients with challenging chronic wounds. Within 6 weeks, all patients demonstrated significant improvement in overall wound status with substantial progression towards closure and healing, including no longer necessitating the need for flap coverage, further debridement or complex wound care allowing patients to transition to home or to lower acuity care settings.

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PI31

Managing Diaper Dermatitis in the Neonatal Population

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Diaper Dermatitis (DD) "is one of the most common skin conditions in neonates and infants. Its prevalence is estimated to be between 25% and 50%" (Blume-Peytavi, M.D. et al., 2014, p. 413). A newborns stratum corneum, the upper most skin layer is "30% thinner than an adults" (Jones, 2013, p. 244). This is important because the stratum corneum regulates "the body's fluids and electrolytes, it maintains thermoregulation, prevents toxin absorption and protects the skin surface from microorganisms" (Jones, 2013, p. 244).
Appropriate cleansing of Diaper Dermatitis is controversial, although the consensus is that "barrier ointments are generally more effective than creams or lotions as they provide a more effective barrier" (Jones, 2013, p. 245). The AWHONN guidelines state to use "petrolatum-based ointments or skin barriers containing zinc oxide at every diaper change in infants at risk for developing diaper dermatitis" (Houska Lund, MS, RN FAAN, Team Leader, Brandon, Ph.D., RN, CCNS, FAAN, Holden, BScN, MScT, RN. et.al., AWHONN, 2013, p. 38).
With an increase in diaper dermatitis in our Neonatal Intensive Care Unit, the request was made for a more standardized management plan. Through surveys we were able to identify the current practice of bedside nurses for prevention and treatment of diaper dermatitis as well as collecting two months of data on patients identified as having DD. This information was collected both pre and post education to determine the efficacy of the education.
Education was given to staff nurses through quarterly staff meetings, one on one interaction, along with attending monthly unit specific shared leadership team meetings over approximately one year. Data was collected two years after initial collection which revealed a decrease in diaper dermatitis by 37%.

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PI32

Quality Improvement Project in the Reduction of Hospital Acquired Pressure Injury (HAPI): Acute Skin Failure (ASF) Determination in Critically-ill Patients through Wound Ostomy Continence (WOC) Nurse-Physician Collaboration

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Introduction: Evidence shows that collaboration involves equal, nonhierarchical partnership between nurse and physician grounded in open communication, mutual trust, and respect. Our hospital-wide nurse-physician collaboration led to standardization of ASF terminology and facilitated the identification of skin failure other than pressure injury (PI) in critically ill patients in our 150 bed-intensive care unit (ICU).

Background:

An increase in HAPI occurrences for past fiscal years (FY19-20) has been recorded (n=155 wounds). WOC nurses reviewed the literature and discovered that many of these wounds fall under the umbrella of ASF diagnosis.

Methods:

WOC nurses conducted retrospective review of 20 patients' charts with wounds identified as HAPI Deep tissue injury (DTI) that evolved into Stage 3, 4, Unstageable PI from November 2019 to June 2020. Predictors of ASF (Organ failure, Mechanical ventilation, Vasopressor, CRRT, Urine output) have been identified as variables in the review. These variables were utilized as patients' criteria for meeting ASF diagnosis. Out of 20 patients reviewed, 11 patients (55%) met the criteria set for ASF. This set of criteria has been presented by WOC nurses to ICU medical directors and providers, with approval for standardization of terminology, documentation practice to address wounds resulting from accumulated co-morbidities and clinical conditions leading to ASF while other organs are failing at the same time. This collaboration led to the development of criteria for wound evaluation in ICU to determine if etiology is ASF versus PI. The American Hospital Association (AHA) has been consulted for ICD10 code usage. Code for Disorders of the Skin and Subcutaneous Tissue L 98.8 has been assigned based on link between skin failure and underlying condition.

Outcomes:

Recognizing occurrence and use of ASF diagnosis in ICU patients led to better workflow between WOC nurses and physicians, leading to 62% reduction of HAPI (59 occurrences for FY 20-21).

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PI33

EXPERIENCES IN CARING FOR PATIENTS SKIN WITH COVID 19 DIAGNOSIS

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Topic: Preventing HAPI in prone patient is not new for our hospital, However, we noticed that standard measures for preventing pressure injury in prone patient appear lacking in patients

diagnosed with COVID-19 in year 2020. Wound ostomy continence Registered Nurse (WOC RN) with Wound Ostomy Resource Team (WORT) members worked to reduce HAPI among this patient population. This Quality improvement (QI) project utilized PDSA method.
Purpose: Reduce HAPI to patients with COVID-19 during/after proning treatment
Objectives: Use of Adaptable (+) air displacement/non powered positioning system (A+AD/NPPS) above standard pressure injury prevention protocol(PIPP) with WORT member unit education.
During COVID 19 surge, hospital had 210 COVID-19 patients in 2nd quarter with 24 patients who developed HAPI. WOC Rn with WORT member (stakeholders) identified that HAPI developed due to limited repositioning ability of primary RN facing medically fragile patient. Standard PIPP includes fluidized positioner, prophylactic dressing, specialty mattress, turning/repositioning, heel protector boots, & body fluid management.
Stakeholders & Hospital leadership approved the use of A+AD/NPPS on top of standard PIPP. Initial education was provided by Company representative virtually followed by WOC RN demonstration on patient. A+AD/NPPS WORT member super user were trained to assist in continued education of primary RN. Initial challenge was encountered but weekly peer to peer WORT Member to primary RN discussion, assistance/demonstration identifying possible areas of pressure injury prevention done in each unit have assisted in staff compliance.
Outcomes: Following implementation of A+AD/NPPS above standard PIPP with WORT member unit education, HAPI number among COVID-19 patient decrease from 13 out of 255 patients on 3rd quarter to 10 patients out of 668 patients at end of 2020 quarter.
Conclusion: Use of A+AD/NPPS with standard PIPP and WORT member unit education, number of HAPI decrease among patients diagnosed with COVID-19 diagnosis.

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PI34

Title: Implementation of a Care Signature: Adult Ostomy Clinical Pathways

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Topic: Identified the opportunity to include an ostomy care pathway as part of the multidisciplinary Care Signature program.

Purpose: Care Signature (CS) is our Health System standard of delivering highest-quality care. CS drives a patient-centered, system approach to provide equitable care processes to all patients across the care continuum. There is value in evidence-based pathways developed by and for our Health System. They address our unique expertise, resources, and processes, identifying local sources of variation and finding solutions that build bridges across the Health System.
Objective: Develop CS Ostomy Clinical Pathways as a clinical tool to improve comprehensive care of the ostomy patient across the continuum.
Outcomes: The CS pathway process began by convening representatives from relevant clinical specialties and care sites. The committee used a stepwise process to explore purpose, scope, and goal setting. Literature review and clinical consensus when necessary was used to define evidence based best practice and help to build the clinical map. The CS pathway team included Health System certified ostomy nurses, digestive health practitioners, and registered dietitians, pharmacists, and staff nurses, facilitated by a CS manager.
Pathway opportunities included:

- Initial management for various ostomies
- Complications triage for multidisciplinary clinicians
- Identifying barriers or limitations to patient self-care management
- Ensure care continuum with referral to outpatient ostomy clinics pre and post hospitalization
- Electronic Medical Record (EMR) pathway integration and order entry

The committee recommendations lead to the completion, circulation and publication of the following ostomy pathways:

- Pre-Op Planning – Ambulatory
- Intra and Post-Operative Care – Inpatient
- Stoma related complications including images – Inpatient
- Ileostomy and Ileal Conduit Complication – Inpatient
- Peristomal Skin Complications with images – Inpatient
- Routine Care – Inpatient
- Ongoing Care – Ambulatory

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PI35

Title: Optimizing Pressure Injury Prevention Intervention Nursing Documentation

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Topic: Pressure Injury (PI) prevention intervention documentation should correlate and be individualized to a patient's risk factors. The Electronic Medical Record (EMR) should support nursing documentation based on the risk assessment.
Purpose: Our system currently uses the Braden Pressure Injury Risk Assessment tool in the EMR to determine patient's risk of developing a PI. A nurse assesses and assigns a score to the subcategory and it is electronically tallied. Currently an overall score of 18 or lower populates the EMR prevention intervention rows for documentation. The interventions were vague, difficult to find and did not correlate to the risk subscale.
Objective: Provide enhanced risk-focused EMR nursing documentation of PI prevention interventions.
Outcomes: A multidisciplinary committee was developed to optimize nursing documentation within the EMR. This included system wound care nurses, clinical documentation specialists (CDS), regulatory representative; staff RNs and a wound physician. Workflow and current EMR documentation was reviewed, including queries by the CDS about EMR workflow used by peer organizations. The committee reviewed these EMR risk tools and documentation for guidance on the format. Decision was made to mimic the format of the fall risk assessment currently used by our system and documented in the EMR. Interventions and wording format were optimized. The enhancement in the documentation workflow now automatically displays more concise and appropriate interventions based on the calculated risk assessment score. This provided a more thorough description of care, being more patient specific and will improve PI prevention documentation. Key stakeholders were provided an opportunity for open comments of prospective changes with positive comments. This new approach was approved for pressure injury prevention nursing EMR documentation use across the health system.

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PI36

Using a Theoretical Framework to Guide Development of a Clinical Unit

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Topic/Significance to Practice
A novel leadership role of WOC nurses is the development of specialty units for patients who have wound, ostomy, and/or continence concerns. Use of a conceptual framework can guide unit development and implementation.
Purpose of the Innovation
Our aim is to share nursing's leadership and engagement in the development of a multidisciplinary clinical research unit based on Rogers Diffusion of Innovation theory. This unit was developed for vaccine testing, but the theoretical components are applicable to WOC nurse-led unit development.
Process/Objectives
Rogers Diffusion of Innovations Theory is a social science theory. Rogers theoretical concepts were: (a) the Innovation, namely the unit's development; (b) Communication Channels

involved staff empowerment; (c) Social System defined by the Mission, Vision, and Values; (d) Time was the adoption of the innovation.
The unit's timeline followed Rogers' processes. Knowledge included the challenge to develop the unit, benchmarking, identification of team members and orientation to research. Persuasion included role function development, literature review, and creation of the mission, vision, and values. Decision was setting up the physical space, promotion of team ownership, and development of flow processes. Implementation included the unit's opening, rapid-cycle process improvements, and formation of team norms. Confirmation was robust subject enrollment, celebration of successes, evaluation of opportunities for improvement, and outline future directions.

Outcomes

Nurses' use and application of a theoretical framework was critical in the development of the unit. This innovative unit (a) elevated nursing as a key component to the success of a hallmark project, (b) showcased nursing leadership in the use of a theoretical framework applicable to the project's development and implementation, and (c) highlighted how collaborative practice among multiple disciplines can function together to accomplish success.

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PI37

Just in Time Air Fluidized Therapy for the Likely Hemodynamically Unstable Post-Op Patient

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Just in Time Air Fluidized Therapy for the Likely Hemodynamically Unstable Post-Op Patient
Topic:
Repositioning hemodynamically unstable (HDU) patients in the intensive care unit (ICU) remains challenging for prevention of hospital acquired sacral pressure injuries. As an 1100 bed level one trauma and urban teaching hospital, patients are transferred for specialized interventions provided by our nationally ranked cardiovascular surgeons. Patients present with multiple co-morbidities and acute conditions that can result in delayed sternal or abdominal closure.
In the cardiovascular ICU (CVICU), multiple stage four hospital acquired pressure injuries (HAPIs) have occurred in this patient population. Multiple interventions were already in place for prevention of HAPIs. After four sentinel events, root cause analysis revealed that surface was the only intervention that was not implemented. CVICU beds are already LAL with CLRT and CPT functionality.
Purpose:
Air Fluidized Therapy (AFT) has been the standard of care for flaps, grafts, intractable pain, multiple large pressure injuries for decades. The challenge was getting true AFT under the likely HDU post-operative patient as soon as possible. AFT is available only as a rental, once ordered can take up to six hours until ready for patient use.

The surgeon will know before the case ends if the patient will have delayed closure. By having AFT available 24/7, these patients benefit immediately from the OR table.
Process/Objectives:
A multi-disciplinary effort was required to trial this pilot. CVICU nursing leaders, education, manufacturer's clinical nursing, OR and PACU leaders, inventory and transportation leaders, nursing administration and WOC nursing all participated.
A dedicated PACU bay was secured for the AFT surface for 24/7 availability. AFT patient billing would begin when surgeon places the order, triggering the replacement AFT bed.
Outcomes:
Since implementation, there have been no sacral stage 3, 4, or unstageable HAPIs in this patient population.

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PI38

Getting to Zero, Eliminating HAPI's in Spinal Cord Injury Patients at a Level One Trauma Center

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Topic/Significance to Practice
In the U.S., approximately 17,900 people suffer a spinal cord injury (SCI) each year. Statistically, one-third of SCI patients will develop a pressure injury during their initial hospital stay. A suburban Level 1 trauma hospital had a HAPI rate of 33% in SCI patients, including stage 4 pressure injuries.
Purpose of the Innovation
The purpose of this quality improvement change was to eliminate HAPI's in SCI patients during the initial hospital admission, through early involvement of the Wound, Ostomy, Continence (WOC) nurse team and specific SCI patient pressure injury prevention guidelines.
Process
The lead WOC nurse organized a multidisciplinary task force to tackle this issue. Under the leadership of the WOC nurse, guidelines were developed specific to the unique needs of this high-risk patient population. The guidelines included: WOC nurse consult on admission, dietitian consult, implementation of pressure injury prevention on admission, and pressure redistribution surfaces on admission and throughout hospital stay. Early and intense involvement of WOC nurses was considered a key practice change and was implemented immediately to assess patients' skin twice weekly, educate nursing staff, the patient, and family on pressure injury prevention.
Outcomes
Since implementation, the average HAPI rate in SCI patients over the last 10 months has decreased to 0.8%, and in the last 5 months, there have been 0 HAPI's in SCI patients. There have been no stage 3 or 4 HAPI's in SCI patients since the practice change.

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PI39

Ostomy through the Ages: Creating WOC interventions in response to age related barriers to ostomy independence and self-care

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Practice Innovation
Creating WOC Interventions in Response to Age-related Barriers to Ostomy Independence and Self-care.
Topic: The world's aging population has many issues that the health care community must address. There are many predictors of these age-related challenges. Providing a pathway for senior ostomates to maintain ostomy self-care and independence is a desirable goal. Issues like declining recall, vision, mobility and dexterity, neuropathy and dementia are age related changes that may affect ostomy self-care. WOC nurses care for ostomy patients throughout the lifespan and in multiple care settings. Interventions are well known, taught, and tested in the core curriculum and board exams. By investigating the lived experience of our aging ostomates in the community, perhaps there are other WOC interventions that can be developed and standardized to aid in ostomy independence in this patient population. With the disturbing trend of patients with ostomies being banned from long term care settings (assisted living, group homes, etc.) WOC interventions that improve ostomy self-care and independence can be developed and standardized.
Purpose: By identifying the most common age-related barriers in our aging ostomates, pathways for more targeted WOC interventions for ostomy self-care in this population will be possible. Creating these pathways will be a process improvement to current WOC teaching in both the inpatient and outpatient settings.
Process: An interview tool was created for WOC nurses for telephone interviews with ostomy patients from two suburban hospital-based outpatient ostomy clinics. Questions were developed that encouraged open ended responses and demographic information. Responses are entered into a word document and sorted by age. Copying responses per age range and placing into Microsoft Word's Word Cloud generator, the most frequent responses will be revealed.
Outcomes: Effective pathways for aging ostomates to maintain their independence and self-care will positively impact their quality of life.

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PI40

Streamlining Provincial Skin Care Practices across the Continuum

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Topics/Significance to Practice: A survey in the US and Canada, reported 1 in 5 incontinent patients had incontinence-associated dermatitis (IAD).[1] A skin care regimen using products that cleanse, moisturize and, protect in combination with incontinence care reduces the incidence of IAD.[2] Healthcare providers require skin care products with demonstrated efficiency and efficacious product ingredients that meet the criteria for preventative skin care.[3]
Purpose of the innovation/objectives: Based on this current evidence, the British Columbia (BC) Provincial Skin and Wound Committee reviewed their existing provincial skin care protocols, the skin care products and, ingredients that were currently being used.
Process/replication: In collaboration with the BC Provincial Supply Chain, data was collected regarding the number and types of skin care products being used. Recognizing the value of a consistent skin care regimen, the committee members looked at the availability of existing skin care protocols and educational resource tools. Next was to determine if current skin care products or other products available in Canada met the criteria for preventative skin care.[3]
Outcomes: Multiple skin care protocols were being utilized with limited educational resources. The data revealed that throughout the province, 57 different skin care products were being used. In order to streamline products and standardize practice a skin care product line consisting of 5 products, was selected. The products chosen were fragrance-free and contained the least amount of sensitizers. A protocol was developed to standardize skin care practices across the province. Education was provided in a variety of formats including: a one page skin care protocol, webinars, online product information sheets, videos and, face-to-face in services.
Conclusions/Implications for Practice: This BC initiative resulted in a standardized approach to skin care and a substantial reduction in SKUs (57 to 5 skin care products) with improved cost efficiencies, simplified protocol and improved skin care outcomes.

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PI41

Triple Skin Challenges for Wound Ostomy Continence Nurses (WOC nurses). Consider a Cyanoacrylate Liquid Skin Protectant for the Treatment of Peristomal Skin Damage (PSD), Incontinence Associated Dermatitis (IAD) and Skin Tears Type I (ST-1): A Case Series

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Statement of the Clinical Problem/Challenge: WOC nurse referrals encompass skin issues including: Peristomal Skin Damage (PSD), Incontinence Associated Dermatitis (IAD), and Skin Tears Type I (ST-1) often accompanied by patient suffering.[1] Peristomal skin complications are experienced by more than 80% of patients with an ostomy within 2 years of surgery.[2] In a survey conducted in the US and Canada, nearly 1 out of 5 incontinent patients had documented IAD.[3] ST-1 are classified as: "no skin loss with skin flap that can be repositioned to cover the wound" and occur more frequently in elderly patients.[4]
Significance to Clinical Practice: The purpose of this case study was to evaluate a cyanoacrylate liquid skin protectant (CLSP) for treatment and healing of PSD, IAD, and ST-1.
Solution/Clinical Treatment Approach: Thirteen patients were evaluated in this study. Five of the 13 patients had ileostomies or urostomies and pain associated with PSD. These five patients received one CLSP application prior to applying the pouch apparatus. Four out of 13 patients had IAD and were evaluated following 1-2 applications of CLSP. Four out of 13 elderly patients with ST-1 were evaluated for closure and healing following one CLSP application.
Outcomes and Conclusion: For the five patients treated for PSD, complete healing was observed at 2-8 days following pouch apparatus replacement and CLSP application. For the four patients treated for IAD, complete healing was observed at 5-8 days with patients reporting improved QOL. For the four patients treated for ST-1, closure was observed 3-5 days after CLSP application with complete healing at 14-18 days. Based on this case series of 13 patients, we conclude that 1-2 applications of a cyanoacrylate liquid skin protectant is an effective treatment for patients suffering from PSD, IAD, and ST-1. Complete healing was observed at 2-8 days, 5-8 days and, 14-18 days, respectively.

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PI42

Our Skin Failure Journey: A Collaborative Approach

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Topic:
Acute Skin Failure (ASF), a condition whereby skin and underlying tissues die from hypoperfusion that occurs with dysfunction or failure of other organ systems. There is no accepted diagnostic criterion for ASF making it difficult for clinicians to differentiate between a deep tissue pressure injury (DTI) and ASF.
Purpose:
During the most recent pandemic the certified wound and ostomy nurses (CWON) experienced an influx of DTI consults. The CWON's suspected ASF as the injuries were not always on a bony prominence, occurred with critically ill patients and unlike pressure injuries, occurred despite preventative measures.

The purpose of this practice change was to develop ASF guidelines for providers and RNs in critical care areas. Accurate recognition of ASF could lead to clarification of patient goals, end of life discussions, and decrease of hospital acquired pressure injuries.

Objectives:

After a literature review, a meeting was held April 2021 with the Inpatient Nursing Director, CWONs, and ICU Nursing Administration to discuss ASF. Initial ASF guidelines were created and utilized by the CWONs to identify patients with suspected ASF.

A follow-up meeting was held in July 2021 with the ICU Medical Director, Coding Medical Director, Inpatient Nursing Director, CWONs, and Clinical Documentation RN's. CWON's were instructed to document DTI versus ASF, until further clarification of appropriate coding could be investigated. When the CWONs suspected ASF, the provider and coders were notified, and data was collected.

A third meeting will take place December 2021 to discuss the ability to code patients and further strengthen guidelines related to ASF.

Outcomes:

Using the initial ASF guidelines, the CWONs identified seven patients with suspected skin failure from July to November 2021.

The journey continues, in collaboration with many disciplines, to create guidelines that will be instrumental in identifying ASF in patients. The CWON's are the key stakeholders.

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PI43

The Value of Ostomy Education with Front Line Nurses

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Topic:

There are approximately 1,000,000 persons living in the United States (U.S) with an ostomy and 100,000 ostomy surgeries performed every year (UOAA, 2021). On a busy 32 bed medical surgical nursing unit the nurses voiced concern over unfamiliarity with caring for ostomy patients. This busy unit consults the wound ostomy continence (WOC) nurse team on average of 500 times a year for new and existing ileostomies and colostomies for simple pouch change, pouch emptying, and troubleshooting leaks.

Purpose:

The purpose of the objectives of this ostomy course is for frontline nurses to gain knowledge, skills, and confidence in the management of a new or an existing ostomy. This course, bridged

knowledge gaps, developed skills, applied knowledge and skills in practice, and ultimately increased the level of confidence among the frontline nurse participants.
Objectives:
A certified WOC nurse was tasked to develop a comprehensive program to improve knowledge, skills, and confidence of frontline nurses. The education consisted of a 2-hour in person class with hands on with ostomy related products, followed by a 4-hour shadow day with a WOC nurse. The course objectives reviewed anatomy, application of pouches, and troubleshooting techniques.
Outcomes:
A survey was built in a secure online database to measure confidence levels both pre and post class intervention using a 5-point Likert scale. The four areas assessed for confidence levels are, educating patients with ostomies, assessing skin and ostomies, preparing peristomal skin, and selecting the correct ostomy appliances. Pre-course more than 50% of the time participants ranked not or slightly confident, post course scores for the four areas scored moderately confident or above. Improvement in confidence levels ranged from 30% to 77% post course. The innovative ostomy class has shown dramatic increases to the nurse's confidence levels in providing care to patients with ostomies.

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PI44

The wide usage pattern of a hypochlorous acid preserved wound cleanser (HAPWOC) in the management of pressure injuries.

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Topic:
Pressure injuries can impair the quality of life, and the goal of management is to create an optimal local wound healing environment[1]. Pressure injuries can be difficult to manage and are associated with significant morbidity and mortality. Wound cleansing is a routine part of managing these wounds. Wound cleansing can aid in the removal of exudate, debris and contaminates. Pressure injuries located on the sacrum or ischium are at a high risk for infection due to exposure to urine and feces.
Purpose:
This poster will present the results of chart review from a large teaching hospital over a period of three months, where the number of patients whose wounds were treated with HAPWOC was determined both on the inpatient as well as on the outpatient side.
Objectives:
A systematic chart review was performed over a 3 month period. Each patient selected presented with a chronic stage 3 or 4 pressure injuries to the sacrum or ischium. Each received a protocol of 10 minute soaks of HAPWOC with each dressing change. Patients were then treated with a variety of topical advanced dressings. All patients were assessed on a weekly basis.
Outcomes:
Over a period of three months, 22 patients were observed, 14 inpatients and 8 patients outpatients were treated with HAPWOC. Each of these patients remained free from infection and showed signs of healing such as increased granulation tissue and a decrease in wound size. Three typical cases are presented. The proportion of patients with pressure injuries that are treated with HAPWOC is high in both settings. We are an evidence driven group of practitioners and the large body of evidence on HAPWOC has driven our adoption and

continued, successful usage, as demonstrated in the 3 patient case series. Recommendations include a prospective study with a larger sample size.

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PI45

Devising a Unique Cost-Effective Way to Protect an Ileal Chimney Pouch During Daily Cecostomy Bowel Flushes for a Special Needs Child

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Topic:
Our patient was a 6-year-old special needs child as a result of a Traumatic Brain Injury at 12 months of age. She is total care with an existing Cecostomy and G-button. The child was admitted for creation of an ileal chimney with ostomy pouching.
Post-operatively, staff found that the child's daily cecostomy flush for her bowel program resulted in the urinary ostomy pouch becoming soiled, and needing to be changed because of this.
Purpose:
Speaking with the child's guardian, we discovered that she received most of her medical supplies in zip-closure type plastic bags. We devised a means of using these plastic bags to protect the pouch each day during the child's bowel program.
Objectives:
We trialed and improved our process of cutting a hole on one side of a plastic bag and trimming the opening with tape to prevent the child from tearing the opening larger. Placing the zip-closure side laterally, we were able to have the option of keeping the urinary pouch connected to bedside drainage. The plastic bag was closed down the side, allowing the bedside drainage to exit out the bottom edge.
The plastic bag stays in place until after the daily bowel program is complete (usually 2-3 hours). It is then removed and discarded. The child's guardian stated she had more than enough bags to use one/day.
Outcomes:
Protecting the urinary ostomy pouch with a modified plastic zip-closure bag prevented stool soiling of the pouch during the child's daily bowel program. Utilizing a resource the child's guardian had readily available provided a cost-free solution to an issue that would otherwise have contributed to unnecessary frequency of ostomy pouch changes. The solution decreased stress for the child's guardian by making daily care less onerous.

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PI46

Home Health and Wound Clinics; A Complicated Relationship

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Topic: Dedicated, brick and mortar wound clinics have been a part of the specialty provider landscape for more than two decades (Shah, 2011). The reality that wound clinics may rely heavily on a robust Home Health Agency (HHA) clinical response for supply procurement, dressing changes, case management, disease state management, vitals/sepsis monitoring and multidisciplinary support can be cause for concern.
Purpose: This retrospective study was conducted to investigate the potential quantitative effects to patients and HHAs who had wounds co-managed by a wound clinic (WC) and those who had wounds managed primarily by the agency's wound and ostomy team (WOT). The subsequent control group (CG) were patients that had diagnoses of wounds and wound documentation in the Electronic Medical Record (EMR). The agency EMR and Electronic Data Warehouse (EDW) and supply vendor were used for analysis of patient data.
Objectives: A reduction in average wound surface area was calculated by comparing the earliest wound measurements and the latest wound measurements (CMS episodes of care; 2020-2021) and revealed as follows: CG 50% reduction, WC 46% reduction, WOT 70% reduction. Average cost of supplies per episode were calculated using available vendor data and revealed as follows: CG $184.33, WC $267.57, WOT $237.48. Average billable visits per first period were calculated using agency EDW and revealed: CG 12.45 visits, WC 9.64 visits, WOT 12.70 visits.
Outcomes: The results revealed a marked improvement in average surface area reduction in the WOT group and may be attributed to the agency's commitment to ongoing touchpoints (secure live video, phone and email consultation) by the field clinicians and wound team specialists.

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PI47

Individualized Turning Schedules for Patients with Spinal Cord Injury In a Rehabilitation Setting: A Nurse Driven, Evidence-Based Practice Change Initiative

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Topic:
According to the National Spinal Cord Injury Statistical Center, 294,000 individuals in the United States have a Spinal Cord Injury (SCI). Individuals with SCI have an increased risk of pressure injury (PI) due to immobility, decreased sensation, and altered pathophysiology. Skin assessments and pressure relief are essential for this population.

Purpose:
The National Pressure Injury Advisory Panel (NPIAP) states persons with increased PI risk should follow an individualized turning schedule when possible. Additionally, comprehensive skin assessments evaluate the skin's tolerance to pressure and is an indicator to guide care and repositioning frequency needs (SCI Model System, 2009).
In the rehabilitation setting, the established practice of turning every two hours for PI prevention may be disruptive to sleep. It can also be demanding for individuals and caregivers to adhere to after hospital discharge.

Process:
An evidence-based practice change was initiated to promote individualized turn times for patients with SCI in a rehabilitation unit. The wound care team created a nursing tool initiating individualized turns by increasing or decreasing turning intervals based on comprehensive skin assessments. When skin assessments reveal intolerance to pressure, the frequency of turns increases immediately. Intact skin that reveals tolerance to pressure, turns are less frequent and advance on a weekly basis. Turning times are fluid, based on skin outcomes. Patient education is provided to promote skin health after discharge.

Outcomes:
Ten patient outcomes were evaluated. Nine out of the 10 patients reported improved sleep quality and quantity. All 10 patients achieved an individualized turn time specific to their needs without PI development or indication. These outcomes display individualizing turns provides less sleep disruption leading to more productive sleep, decreased need for caregiver assistance, and increased satisfaction with self-directed care.

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PI48

INSTRUMENT FOR THE IMPLEMENTATION OF THE NURSING PROCESS (NP) IN STOMA CARE

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OBJECTIVE: To report the experience of applying an instrument designed to assist in the implementation of the Nursing Process (NP) during stoma patient care. METHODOLOGY: This is an experience report, conducted in the period from August 2015 to May 2017, in a Reference Center for Stoma Care in Southern Brazil. On A4 sheets, the questions were made to be answered by the nurse at the patient's first consultation. The instrument deals with the clinical and surgical identification, previous history, pre-existing diseases, life habits, acceptance of the current condition, type of device used and who performs the exchange of the same, if the patient has help from someone to face the situation, as well as data from the directed physical examination. This information is collected during the review of the discharge plan, the medical history and physical examination. There are also spaces available for writing down the established nursing diagnosis and planning the actions to be taken. It is applied to all registered patients. RESULTS: there was an improvement in the approach to the patient. The instrument allowed a complete, directed and organized data collection. It provided a better knowledge of the patient, and the creation of a link and the identification of problems. It allowed for the definition of nursing diagnosis and planning of care for later implementation. CONCLUSIONS: The instrument became essential, since it provides nurses with improved understanding of the NP, as well as knowledge application. Based on what was verified and analyzed, NP provides improved care, improved practice of health education, and stimulates self-care, leading the patient to a better quality of life.

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PI49

STOMA SUPPORT GROUP: AN EXPERIENCE REPORT

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OBJECTIVE: to report the experience of the implementation of support groups in a Reference Center for Stoma Care. METHODOLOGY: an experience report, carried out in the period from 2002 to 2017, in a Reference Center for Stoma Care in Southern Brazil. The group meetings are monthly, last 90 minutes and are coordinated by the stomatologist. The invitation is made through the dissemination of posters, and the target audience is the registered patients, family members, and/or caregivers. The theme and the dynamics to be carried out can be pre-defined by the health team or indicated by the participants. To meet the physiological, psychological and social needs, professionals from different areas of health are involved in

certain meetings. RESULTS: the group is an important space for discussion, clarification of doubts and health education and exchange of experiences, strategies and information for adaptation. Information shared among the participants, who live similar situations in relation to stomas and with the professionals, teach, encourage and support the individuals in facing their disease and/or condition. Moreover, the dynamics performed, aimed at personal appreciation, and help to improve self-esteem and self-acceptance. There is a great interaction among all the participants, which allows the creation of an essential link. CONCLUSIONS: through the support provided in the groups, it is possible to better accept and adapt the stomas to their condition, facilitating their reinsertion in the social cycles, with the resumption of daily activities, contributing to a better quality of life. In addition, the dynamics carried out, aimed at personal appreciation, help to improve self-esteem and self-acceptance. There is a great interaction among all the participants, which allows the creation of an essential link.

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PI50

Ostomy Support Group to Improve Quality of Life in Oncology Ostomates

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Topic: WOC facilitated ostomy support groups are an evidence-based method aimed at improving quality of life in the individual with an ostomy through the preoperative and postoperative continuum.
Purpose: The WOC nurse is well prepared to lead and provide continual support through for preoperative and postoperative patients and caregivers who have or will have an ostomy. Providing preoperative education, discussion, and learning tools in addition to scheduled discussion visits helps to decrease patients' feelings of isolation while promoting a sense of independence and an increased outlook on returning to a fulfilling lifestyle.
Process: Individuals with a pending or current ostomy are invited via personalized written invitation from the WOC nurse. The support group meets bi-monthly for 1.5 hours. WOC facilitated discussion topics theme each meeting. The meeting theme assists in creating a framework for the discussions. The meetings begin with introductions, re-caps, and any news or updates regarding ostomy care. After the introductory phase participants usually have bonded over shared experiences and are able to move into ostomy discussion. Discussions centralize around four foci including: discussion of medical concerns, processes of self-care, creating reality around ostomy misconceptions, and strengthening self-appreciation.

Outcomes: Outcomes of each support group meeting are measured by participant feedback. Discussion questions also prompt participant feedback during the support group and assist in tailoring topics for future meetings.
Communication of Ideas: The inclusion of diverse perspectives from ostomy patients and caregivers of varied socioeconomic, age, gender, political, and oncology process backgrounds creates a rich environment for sharing amongst participants. Future work is aimed at evaluating the impact on quality of life using a validated assessment tool for those that do versus those that do not participate in ostomy support groups.

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PI51

Initiation of a Pressure Injury Prevention Team: Impact on Turning, Repositioning, and Pressure Injury Occurrence

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Topic
Hospital acquired pressure injuries can cause significant patient harm, pain, increase in length of stay, and health care costs up to $70,000 to treat. Pressure injuries also continue to contribute to significant morbidity and mortality in ICU's. Inconsistencies were observed in the surgical intensive care unit (SICU) with turning and repositioning patients every two hours, as well as an increase in occurrence of pressure injuries.
Purpose
The purpose of this study was to validate if a designated pressure injury prevention team (PIP) tasked with turning and repositioning all hemodynamically stable patients in a SICU, would impact pressure injury occurrence and increase the frequency of turning.
Process
A care improvement initiative was implemented utilizing a team of trained nurse externs in a 23-bed SICU, within a large academic medical center. The initiative occurred between June 7th and July 31, 2021, for 12 hour, day shifts only. The externs were paired to provide the support needed for all turns. Data was collected using the standard documentation within the electronic medical record. The team was tasked to round every two hours during their shift and turn or help mobilize the patient and document their care.
Outcomes
Data was collected from the EMR six months prior to the study and divided into a monthly summary of the total number of turns per month. The monthly data did not show a significant difference in the total number of turns per 12 hour period, when compared to the total number of turns with the PIP team. The total number of pressure injuries during the initiative did not show a decrease from previous months. The pressure injury occurrence remained the same.

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PI52

Engaging Teams for HAPI Prevention: Sustaining Energy with Ownership

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Topic: HAPI prevention using teams, promoting best practice bundle.
Purpose: Engaging teams at a unit level promote ownership is best for HAPI prevention. While prevention principles are similar, unit cultures and workflows differ. Application strategies rely on unit level implementation.
Objectives: Learner will cite benefits and strategies of team engagement with system level HAPI prevention, supporting a skin champion program.
Our BASIC skin bundle: **B**egin with assessment, **A**lleviate shear/friction/ pressure, **S**kin protection by managing moisture, **I**mproving nutrition and hydration and **C**ommunication via handoffs and 4-eyes assessment, has been the core of teaching and the basis of documentation. Braden sub scores at risk have required documentation in the electronic medical record. Partnering with efforts to reduce CAUTI by removing indwelling catheters, led to the implementation of female external catheter for urine collection, providing continence, output measurement with decreased risk of dermatitis. HAPI rates have decreased with substantial reduction of CAUTI across our system in the past year. Safe patient handling initiatives may involve devices that can negatively impact patient skin. Our skin care committees have actively engaged in product selection and implementation through advocacy and education efforts. This collaboration has improved transfer safety options with no negative impact on HAPI rates. Prevalence studies provide active surveillance and unit champions engage in assessment and learning and share the findings.
Outcomes: Like keeping good turgor with healthy skin, our champs have provided resilience in our skin health program. In our suppressed meeting times during pandemic stressors, we have learned that the foundational efforts of champion program have provided some sustained energy. We pivoted communication of best practice tips, HAPI rates, and gratitude to online platforms, huddle points, visual management boards and at-the- elbow rounding. The messages of gratitude for work well done provides needed affirmation to hard working teams!

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PI53

Achieving Closure of the High Output Enterocutaneous Fistula with the use of an Extracellular Matrix in Patients with Multiple Comorbidities.

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Topic: An enterocutaneous fistulas is an abnormal passage that develops between the intestine and the skin. Enterocutaneous fistulas can develop spontaneously but most are

iatrogenic and develop postoperatively. They develop more commonly in patients with multiple comorbidities. High output enterocutaneous fistulas are challenging to manage, maintain output and get to closure. The spontaneous closure rate for this type of complex fistula is less than 10%. Patients that develop an enterocutaneous fistula have a higher mortality rate due to sepsis, nutritional abnormalities, and electrolyte imbalance.
Purpose: The use of an extracellular matrix to achieve closure of the high output enterocutaneous fistula in patients with multiple comorbidities that failed to close using traditional medical management.
Process: The extracellular matrix was applied weekly until closure. The wound bed surrounding the fistula was debrided of any non-viable tissue. The extracellular matrix was applied in two forms powder and a two-layer sheet. A negative pressure wound therapy system was placed on low continuous suction for the first two applications and then a pouching system was used to maintain output. The extracellular matrix facilitates the body's ability to remodel site appropriate tissue to achieve healing.
Outcomes: Closure of the high output enterocutaneous fistula occurred after five weekly applications of extracellular matrix.

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PI54

Implementing and Sustaining a Nurse Driven Skin Tear Protocol in Long-Term Care

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Topic: Payne & Martin brought skin tears (ST) to the attention of wound/skin specialists, and to the wound care community, discussing the significance in individuals aged 55 years and older, living in long-term care facilities. Skin tears are often preventable but also high risk to become chronic wounds and impact overall quality of life. Though STs are frequently underreported, literature suggests STs have a prevalence equal to or in some cases greater than pressure injuries (LeBlanc, et al., 2016).

Purpose: implement a nurse driven skin tear protocol to increase times and rates of healing in non-complicated skin tears with an evidenced based, consistent treatment approach. Treatment may be implemented by bedside nurses with a standing protocol in place and follow-up by the certified wound specialist at the next business day/available opportunity. Goals include an increase in healing time, pain control, and preventing infection and complications of non-healing or slow-healing wounds.

Objectives: initially a focus on prevention: moisturize, protect, and treat the cause. Treatment: systematic, evidenced-based approach with non-adherent contact layer and silicone/foam bordered dressing, changing three times per week and as needed. Frequency may vary based on wound appearance, drainage, and other factors as determined by the certified wound specialist.

Outcomes: implementation of a nurse driven skin tear protocol with consistent, evidenced-based treatment and follow-up resulted in healing of non-complicated skin tears within an

average of two weeks or less. Additionally, zero incidences of infected or non-healing skin tears were reported. Pain was minimal/controlled during wound care as observed and documented by nursing. Collaboration, support from leadership, an interprofessional approach and frequent communication among disciplines led to the success of implementing and sustaining a nurse driven skin tear protocol in a long-term care setting.

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PI55

Standardization of Wound Care Products and Development of a Pressure Injury Treatment Algorithm to Support New Wound Ostomy Continence Nurses

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Topic/Significance to Practice: Clinical Nurse Specialists (CNSs) in a large, tertiary care Midwestern medical center were trained to stage and treat pressure injuries (PIs). Knowledge of PI staging, and treatment varied as did wound healing rates revealing opportunities existed. Nineteen new wound ostomy continence registered nurses (WOC) RNs were hired to enhance the care of patients with PIs. To support the WOC RNs, an algorithm for pressure injury treatment recommendations and a standardized wound care product formulary were developed and implemented.
Purpose of the Innovation and Objectives: The objectives of this pilot project were to 1) develop and initiate use of an evidence-based wound care algorithm for newly hired WOC RNs 2) establish a standardized wound care product formulary, and 3) assess the costs of the products used after these changes.
Process/Replication: A standardized treatment algorithm was developed for new WOC RNs to assess and treat PIs according to the stage and depth of the wound, and consult notes were reviewed for its use. Education about the algorithm was required for staff and WOC RNs. A standardized wound care product list was developed based on the algorithm's recommendations and used to stock each hospital unit's supply room. Product usage and costs for a unit's supply room recommendations were compared one-month before and after the project.
Outcomes/Implications Education was delivered to staff RNs and WOC RNs with 100% and 94% pass rates respectively. Review of wound consult notes showed WOC RNs followed the algorithm 100% of the time. Review of staff RN documentation showed correct dressings were documented and applied by 95% of staff RNs. A 14% cost savings in products was realized after standardization. Evaluation took place with WOC RNs through an electronic survey with 27% response rate. Overall, 75% were satisfied and 25% were neutral with the implementation project.

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PI56

Restoring dignity - applying evidence and experience to clean up feet

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Title - Restoring dignity - applying the evidence to clean up feet
Topic - Cleaning feet and lower extremities, especially neglected skin, is a challenge that foot care nurses regularly face.
Purpose - To explore a skin cleaning methods that is safe, efficient and cost effective.
Objective –To use a product to remove dirt, sweat and dead skin that can build up on the surface of the skin while allowing the natural sebum oil of the body to reach the skin surface unimpeded to prevent infection and lock in hydration while maintaining pH balance.
Outcomes – Soaking, scrubbing and using soap and water has long been the nursing go to for skin cleaning. A tradition rather than evidence-based, this method can cause:- maceration (especially between the toes), irritation (if the soap is not well suited to the skin), wounds (if scrubbing is too intense for fragile skin) and may strip the skin of healthy oils and microbes. Skin is thin, acidic, and is protected by oils and macrobacteria. It is the body's largest organ and first immune system defender. Keeping it healthy and intact is an important nursing role and the benefits of therapeutic touch through massage while actively listening to patients' needs and concerns cannot be underestimated. Using different weight oils to clean skin (e.g., olive oil, coconut oil, sesame oil, almond oil) is a very efficient, cost effective, successful and gentle method of cleaning and maintaining skin that is safe. Used for centuries, very portable and easy to use, oils can be applied liberally, and easily lift off grime and dead skin in seconds without causing harm. The right oil will not cake or cause harm and can be used safely by diabetics. As with any products, caution needs to be taken with allergies. Olive oil is hypoallergenic.

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PI57

WAR ON WOUNDS: Maintaining Momentum Through The Covid Fog To Reduce Hospital Acquired Pressure Injuries

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Topic
Maintaining pressure injury prevention (PIP) efforts through COVID 19 in our 400-bed acute facility has been challenging and demanding. Pre-pandemic we achieved a reduction in Hospital Acquired Pressure Injuries (HAPI). Contributors to our success were improved documentation, unit-based skin champions attending monthly meetings with WOC RNS, and vendors rounding to educate staff regarding PIP products and practices. Currently, meetings and vendor rounding are restricted resulting in alternative methods for education and information sharing. With staffing shortages and new staff comprised of mostly new grads and travelers, continuing PIP and documentation education for staff has been difficult.
Purpose:
The purpose of this project was to demonstrate the effect of innovative PIP education on HAPI reduction throughout the pandemic.
Process
Strategies and tools developed and used by the WOC nurses included monthly virtual skin champion meetings, new hire small classes, shadow experiences and tip sheets via email. These were used to increase access to learning opportunities and have enabled us to continue to coach nursing staff during the pandemic. Continual HAPI data collection allowed us to track our process and identify opportunities to mitigate risk and to prioritize education needs.
Outcomes
Although HAPIs increased in the ICU through 2021 compared to 2020 our data revealed a general reduction in HAPIS across other in-patient units with a 40% decrease in heel pressure injuries and 28% reduction in medical device-related pressure injuries. Based on an average cost of $20,000 per HAPI, this has resulted in a facility cost saving of over $400,000. Maintaining momentum throughout our facility in our ‘war on wounds ‘strategy demonstrates wins can still be made as we come out of the COVID fog.

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PI58

Implementing a Nurse – Led Ostomy Clinic During the Covid-19 Pandemic

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Introduction: In March 2020, Covid-19 was declared a pandemic. Facilities in the Northeast United States became part of the epicenter, including this 591-bed Level 1 Trauma facility. Elective surgeries and procedures were suspended. With overwhelmed health systems and

stretched medical resources, those with milder symptoms were encouraged to stay away from the Emergency Room of hospitals. Telehealth/Virtual visits became the norm.
Challenge: Complications of new and existing ostomies may require in-person assessments and treatments. Continuous stoma care is needed to improve outcomes and enhance quality of life. These individuals are also part of a highly vulnerable population. Keeping them away from Emergency Rooms was essential.
Interventions: Colorectal Surgical Services requested implementation of a Nurse – Led Ostomy Clinic to triage patients and prevent ER visits and hospital admissions. From April 27, 2020 through June 26, 2020 it was arranged for the Certified Wound, Ostomy, Continence Nurse Specialist to have clinic hours on 12 specified dates. There were 2-4 hour blocks of protected time. Visits were conducted via telehealth and those with significant complications were scheduled for in-person visits.
Outcome: A total of thirty visits were conducted and there were zero ER visits and unplanned hospitalizations. Complications (18) seen at the Ostomy Clinic included: Peristomal Dermatitis, Stoma granulomas, Mucocutaneous separation, Peristomal Pyoderma Gangrenosum, Pseudostoma, Stoma prolapse, and Enterocutaneous Fistula. There were four patients in which surgery could not be delayed and stoma site marking and pre-operative education were provided. The remaining eight (8) patients required further ostomy teaching and change in supplies. These were managed via Telehealth.
Conclusions: Major changes were required during the pandemic. Having a Nurse – Led ostomy clinic allowed for continuity of care and management of complications. While following directives to stay at home, our facility continued to meet the needs of our vulnerable patients.

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PI59

The Diabetic Foot Ulcer Support During Covid 19 Pandemic in Indonesian Wound Care: A Tele-Wound

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Abstract Tect:
Topic. There were numerous problems in the administration of wound care by nurses during the Covid-19 pandemic, including the need to preserve a safe distance when treating wounds, as well as people fear of catching Covid-19. This created a dilemma in treating wounds. The Covid-19 epidemic had a variety of effects, both individually and collectively. When it comes to getting these services, the community frequently faces challenges.
Purpose. To explore the experiences of wound care patients with Covid-19 with home care by using telenursing.
Process/Objectives. We are interested in using an online internet method service, first we explain the program and procedures for consultation and education related to wounds such as techniques for cleaning wounds, performing autolysis, making the wound moist and the technique of choosing the right wound dressing. We use online internet connections such as video calls, WhatsApp, and chatbots with smartphones. During the COVID-19 pandemic, patients and caregivers can use these strategies to communicate easily while healing wounds.

Outcome. Patients feel the positive impact of this program, patients do not need to come to the wound care center, especially patients with comorbidities, patients can communicate via smartphones which are very safe, and patients are calmer and more distant from exposure to covid 19, resulting in an increase in the patient's quality of life. This tele-wound is very well developed to improve the care service system through the internet-on-smartphone. The implementation of home care services for wound care and online services concludes that wound care with tele-wound services is very well carried out in treating wounds with various complications during the COVID-19 pandemic.
Keyword:*The Diabetic Foot Ulcer, Tele-Wound, COVID-19 Pandemic*

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PI60

Infrared Thermal Imaging: A New Paradigm for Wound Care

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Topic: Wound care remains an unmet challenge, as over 8 million people in North America alone live with a chronic wound. Infrared thermal imaging (IRT) is a non-invasive imaging technique that has successfully been used in the past few years to assess a wound's healing potential and its physiology.
Purpose: To conduct a narrative review on the effectiveness of IRT for assessing a wound's healing potential and its inflammatory or infectious status.
Objective: A review of the literature was performed including papers on wound healing and IRT in the past 10 years. Papers describing how IRT was used to monitor a wound's healing potential, its inflammatory status, or the presence of infection were included. The databases searched included Medline, PubMed, and Scopus. No restrictions on language were used.
Outcomes: IRT was found to be effective for assessing a wound's healing potential. Lower temperatures were correlated with decreased likelihood of attaining a complete wound closure, longer times to heal, and the need for surgical management, including amputation. IRT was also found to be prognostic for the treatment modality of wounds when categorized as conservative vs. surgical management. The main IRT features that predicted better healing potential were wounds with temperatures closer to that of uninjured skin and slightly warmer periwound areas.
Increased temperatures in the periwound area were found to be associated with increased likelihood of infection, both in open and post-surgical infections. However, compared to the healing potential where a larger body of evidence was found, scientific papers describing the

use of IRT for diagnosing wound infection were scarcer. As such, this is a significant gap in the literature that needs to be addressed.
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PI61

Healthy strategies for skin care in the pronator covid patient

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TOPIC: HEALTHY SKIN CARE IN TIMES OF COVID
PURPOSE: Implement strategies in a Colombian Clinic that allow to preserve the healthy skin of patients with Covid-19 who require pronation.
OBJECTIVES:
Identify the critical points of skin care of the patient that requires pronation
Establish preventive strategies for skin care in critical moments.
Socialize the strategies with the nurses.
Monitor and control strategies.
OUTCOMES:
Among the critical moments for the care of the patient who requires pronation, 3 were identified, determined and the following strategies were described: Preventive measures after the patient's pronation, Preventive measures when initiating pronation, Preventive measures during pronation. The following activities are described: the inspection of the skin, the protection of the areas of bony prominences with pressure-releasing foams, the use of hyperoxygenated fatty acids, the changes of position for which a clock of changes of positions was designed for the patient in prone.
Said position change clock has these positions:

- Right swimmer posture: upper right limb up in neutral position, with the elbow at 90 ° (to avoid hyperextension of the shoulder), upper left limb down, head turned to the left, lower right limb in flexion, lower left limb in neutral position.
- Left swimmer posture: upper left limb up in neutral position, with the elbow at 90 ° (to avoid hyperextension of the shoulder), upper right limb down, head turned to the right, lower left limb in flexion, lower right limb in neutral position.

- Up butterfly pose: both upper limbs up keeping the shoulders in a neutral position and the elbows at 90 degrees to avoid hyperextension of the shoulders, head turned to the left), lower limbs neutral position.
- Butterfly down position: Both upper limbs down (parallel to the thorax), head turned to the right, lower limbs neutral position.

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PI62

An Outpatient Ostomy Clinic Model

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Topic: Most people living with ostomies require care across their lifespan (Wound, Ostomy and Continence Nurses Society Guideline Development Task Force, 2018). WOC nurses have specialized training and experience to provide essential care preoperatively, postoperatively, and in the long-term. Since much of this care is provided outside of the hospital, a large Midwest academic medical center has developed a model for ostomy care in the outpatient clinic setting. **Purpose of the Innovation:** According to the Center for Medicare and Medicaid Services (CMS, 2020), billing for care provided in the outpatient clinic setting must be provided by a practitioner or a nurse working "incident to" the provider's care. To meet the "incident to" requirements, the provider must assess the patient, provide a valid signed order, and provide the appropriate level of supervision (CMS, 2020). Supervision means the provider is "on the physical premises" and must be able to provide immediate assistance if required (CMS, 2020). While care provided in the 90-day global surgical period is included in the surgical payment from Medicare, care provided by conditions not part of the normal recovery from surgery may be billed separately (CMS, 2019). **Process:** In the clinic model, the ostomy advanced practice provider (APP) sees patients for their initial assessment, provides diagnoses of stomal and peristomal skin complications, develops the patients' plans of care, writes ostomy clinic orders, and provides appropriate supervision of the WOC nurses. The WOC nurses provides preoperative education and care to patients under the direction of the APP. **Conclusion:** In the six months since implementation of this program, the facility provided 591 outpatient ostomy clinic visits in which 89% were billable per CMS guidelines. The outpatient ostomy clinic model with APP supervision of WOC nurses meets CMS billing criteria and demonstrates financial viability for providing ongoing care to ostomy patients.

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PI63

Assessment of the Off-centered Ileostomy Os to Optimize Management to Prevent Peristomal leakage and MASD

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Stoma type (particularly ileostomies), construction, location within the abdomen, stoma projection, and stool consistency are associated with potential peristomal leakage and MASD. However, little is known specifically about the stoma os and risk for leakage. In addition, the stoma os has not been part of the standard assessment of stomas, and its impact on complications is unknown.

Nurses in our stoma clinic observed a relationship between the direction of the stoma os and increased leakage. Nurses noted peristomal MASD in the area in which the stoma os was pointing. Therefore, to reduce leakage and subsequent peristomal MASD, we enhanced our standard stoma assessment to identify patients at risk.

Our enterprise standard practice includes an established template to document stoma assessment. We added two additional assessment items into the EMR template: 1) os centered/off centered 2) direction of the os utilizing the clock face. In turn, we engaged in aggressive strategies in care of the off-centered os to mitigate leakage and subsequent peristomal MASD and intensified patient awareness and engagement in care. In our experience, leakage decreased with the use of barriers with convexity and deep convexity. Anecdotal evidence from clinic nurses suggests fewer stoma clinic visits for leakage, less observed leakage, and improvements in peristomal skin healing. By enhancing and standardizing the additional assessment items into care, nurse-to-nurse and nurse-to-patient communication has improved. Our clinic team has observed increased patient satisfaction attributed to reduced leakage and improved/healed skin. In addition, patients have reported cost savings as fewer ostomy supplies are needed. To validate our experiences, we are now developing a non-equivalent two-group design research study to compare our clinic outcomes (resolution of leakage, MASD diagnosis, stoma clinic visits) to usual enterprise standard care.

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PI64

WAR ON WOUNDS: Reducing Facial Hospital Acquired Pressure Injuries During Proning in the ICU through the Pandemic

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TOPIC

Quality initiatives to reduce hospital acquired pressure injuries (HAPIs) in the intensive Care Unit (ICU) were taking effect through 2019/20. Positive outcomes achieved were a significant reduction of full thickness, sacral and medical device related pressure injuries (MDRPIs). However, due to frequent COVID surges HAPIs increased through the ICU through 2021 including an increase in facial pressure injuries due to manual proning. This required increased efforts for pressure injury prevention (PIP) during challenging and unprecedented times.

PURPOSE

The purpose of this project was to reduce facial pressure injuries in the ICU by implementing specific interventions to mitigate risk.

PROCESS

The DMAIC process and Plan Do Study Act' framework (PDSA) was used to structure our projects along with robust data collection and evaluation of practices related to HAPIs. Two products, 1: a foam based pillow and 2: a fluidized positioner were evaluated consecutively to reduce risk of proning facial pressure injuries. This was a collaborative effort between RNs, RTs, leadership and the WOC RNS.

OUTCOMES

Ten HAPIS were reported using the foam pillow through 2021 and one facial HAPI has been reported since implementation of the fluid positioner since October 1st, with increased staff satisfaction of overall performance of this product. Transitioning from the foam-based pillow to the fluidized positioner has resulted in better patient outcomes with an anticipated projected savings of $120,000 in avoided cost. Ongoing data collection and improved staff expertise when using this product will hopefully move us closer to achieving and sustaining zero facial proning-related pressure injuries over the coming months and beyond.

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PI65

Web based HAPI APP

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Topic:
Using a web based app to collect and evaluate National Database of Nursing Quality Indicators (NDNQI) hospital acquired pressure injury (HAPI) point prevalence study results.
Purpose:

The purpose of the project was to reduce the time involved in NDNQI data retrieval and improve the accuracy of the data that the staff recorded during point prevalence studies. Retrieval of the required data was time consuming and very labor intensive. The data collection process was fraught with challenges, including inability to find information, potential transcription errors, and overall inconsistency between abstractors.
Objective:
The purpose of this project was to develop a web based application (app) to capture data for reporting HAPIs. At completion, a unit based report generates for reporting purposes. Our objective was to modify our app and convert it to a web-based format. We updated the app to make the program more user friendly, streamlining the user's steps when entering the data.
Outcomes:
Evaluation includes staff satisfaction as well as time to compile and report survey data. Staff rated statements related to ease of use and satisfaction with the revised app on a scale of 1-4 (1=strongly disagree; 4=strongly agree). Mean scores ranged from 3.1 to 3.36. Preliminary results suggest a savings of approximately 8 hours processing the data. The web-based application data was consistent with the previous version of the app.
Innovative use of technology provides an effective and efficient method to gather and report HAPIs. More accurate and efficient surveillance data allows nurses to better identify problems related to HAPIs and focus on interventions. Our new application is web-based so can run on multiple systems depending on what the institution has available instead of being limited to a specific type of technology. The system will also be adapted to track other quality measures in the future.

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PI66

Characterization of Hospice Patients' Wounds within Last 14 Days of Life

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Topic: Individuals receiving hospice care have a relatively high prevalence of wounds, estimated up to 33%. Existing literature suggests some of these wounds are unavoidable, associated with the dying process, and terminology varies: Kennedy terminal ulcers (KTU), skin failure, Trombley-Brennan terminal tissue injury, and skin changes at life's end (SCALE). **Purpose:** Currently, descriptions of end-of-life (EOL) wounds are limited to a few published case studies. Our palliative wound consult service responds to an average of 112 wound consults per month for hospice patients. We sought to provide insight into EOL wounds and improve care recommendations. **Process:** We reviewed wound consult documentation and decedent demographics to look for patterns of wound symptoms to provide a characterization of hospice patients' wounds within the last 14 days of life. **Outcomes:** Over a 12-month period, 157 wound consults were provided within 14 days of patient death (average 7.6 days). The average age was 82.1 years and 59.2% were female. The top three hospice

terminal diagnoses for these decedents were cardiac disease [n=39 (24.8%)], dementia [n=31 (19.7%)], and cancer [n=30 (19.1%)]. Most patients were cared for at home at time of death [n=114 (62.6%)]. Data suggest wounds associated with the dying process present as deep tissue pressure injuries usually over the sacrum or other bony prominence. The skin may be intact with dark discoloration ranging from red to purple to black or non-intact with soft eschar obscuring all or part of the wound bed and surrounded by intact skin with dark discoloration ranging from red to black to purple. For wounds with non-intact skin, bleeding, heavy exudate and/or malodor are usually present. Results of this project will help improve identification of likely unavoidable wounds in patients at the very end of life and provide appropriate education and wound care guidance to the patient and caregiver.

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PI67

Interdisciplinary Collaborative Effort to Standardize Ostomy Patient Care Process to Improve Patient Outcomes

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Topic: Improvement of ostomy patient care and education process to improve post operative patient outcomes
Purpose: The purpose of this presentation is to describe an evidence-based practice approach in a 450-bed community teaching hospital in a multi-ethnic inner-city neighborhood to standardize and improve the discharge process for new ostomy patients in order to decrease post-operative complications and readmissions.
Objectives: Improve ostomy patient care outcomes. Individuals undergoing ostomy surgery face multiple challenges related to recovery from their surgical procedure, changes in lifestyle and body image, and adapting to their new normal. Peristomal skin irritation and pouch leakage can be devastating post-operative complications for this patient population.
A retrospective review identified an increase volume of new ostomy patients over the last 2-3 years, some with post op complications. This drove us to standardize the ostomy teaching practices and discharge processes in order to minimize post-operative complications and to provide a seamless transition to the community.

Results: Of the ostomy discharges, complications were as follows: 2 cases were related to delay in ostomy consult order, 7 cases were due to complexity of the ostomy stoma, including stoma retraction, proximity of the ostomy to surgical site, creases and folds that were difficult to secure pouching and 1 patient was out of supplies. This helped to identify gaps in processes and areas for improvement that will benefit our patient outcomes.
Conclusion: Interdisciplinary collaborative effort with standardization of products promoted patients self-sufficiency and limited complications when transitioned to the community. However, some complex stomas with difficult pouching, had peristomal dermatitis with skin

erosion. Nursing education, timely WOC consult, and additional discussion with surgical team on stoma location will potentially improve outcomes.

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PI68

Wound cleansing: A return to basics using an evidence-based clinical framework

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Effects of wound chronicity on the healthcare industry and on quality of life is not a new concept and a great deal of research has been given to the development of innovative wound care products promoting optimal wound healing.[2] Biofilm serves as a fortress for bacteria and can be seen as the single most important cause of persistent delayed healing. Biofilm is not easily identified, even with the best clinical eyes, however, the effects on wound healing can be readily recognized by looking at delayed wound healing times and ineffective treatments. [5] A foundational framework, was implemented into patient care plans focusing on cleansing, debridement/refashioning and dressing. Wounds are cleansed at each visit using evidence-based antibiofilm cleaning products such as surfactants, known to help restore cellular activity and prevent microbial attachment [3] and hypochlorous acid containing solutions which are known to have rapid and broad spectrum antimicrobial activity.[4] Gentle to moderate force is used during cleaning to promote a core principle of wound hygiene; to remove all wound and foreign debris, residual biofilm and old dressing product. Giving focus to the presence of devitalized tissue, mechanical debridement was completed at each clinic visit by CWOCN, if clinically appropriate. Secondary dressings where selected to promote an optimal healing environment based on the TIME framework.
Over 6 weeks, a significant improvement in overall healing was noted. The presence of healthy and viable wound bed tissue increased and a noted decrease was seen in patient comments of pain and discomfort. Selected treatments appeared more effective in comparison to healing trajectories prior to the foundational framework implementation. Physical intervention is imperative to the successful management of biofilms in chronic wounds.[6] The benefits of a foundational framework and owning clinical stewardship over this framework will provide the best wound care outcomes for our patients.

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PI69

PROPOSAL OF A VISUAL GUIDANCE FOR CLINICIANS TO PREVENT PRESSURE INJURY IN PATIENTS IN PRONE POSITION

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Introduction: Pressure injury prevention in patient in a prone position is a challenge. The prone position is recommended for patients with acute respiratory distress syndrome, for example, in certain patient with SARS-CoV-2 infection. In face of a pandemic, the volume of patients in prone position increased considerably and there was a demand for guidance for clinicians regarding pressure injury prevention for those patients.
Purpose: To propose a visual guidance for clinicians to prevent pressure injury in patients in prone position.
Methodology: Systematic review conducted on Medline/PubMed, CINAHL and Scopus. The search was first done in June 2021 and updated in November 2021. All studies published in English, Portuguese or Spanish that reported strategies to prevent pressure injuries in prone positioned patients were included. No published date restriction was applied. A manual search on the Wound, Ostomy and Continence Society and National Pressure Injury Advisory Panel websites were also performed.
Results: 82 titles were retrieved from the 3 databases and 3 additional documents were included from the WOCN and NPIAP websites. After analysis of the titles and abstract 23 titles were included. The majority of the studies recommended applying foam dressing to all bony-prominences, as well under medical devices on the face, including chin, cheeks, ears and forehead. A poster was created with visual demonstrations showing how/where/what to apply in each area. A video was also created in partnership with respiratory therapy department demonstrating how to apply the foam dressing under medical devices on the face.
Conclusion: A clean and simple visual guidance for pressure injury prevention in prone position patients can provide a fast and easy reference for clinicians and facilitate the process while proning patients. The poster and video will be validated by specialists in the next phase of the study.

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PI70

The Use of Telehealth to Enhance Collaboration Between Specialized and Non-specialized Wound Care Practitioner in Northwestern Ontario Communities, Canada, in Times of COVID-19 Pandemic

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Topic/Significance to practice: The challenges of providing timely wound care have become more apparent than ever during the COVID-19 pandemic.[1] During COVID-19, outpatient wound care was scaled back and deemed unessential. A simple wound may not be viewed as an essential problem, but can most certainly become threatening to the individuals' limbs or even life.[1,2]
Purpose of the innovation/objective: Demonstrate the usability and benefits of Telehealth for enhancing collaboration between specialized and non-specialized wound care practitioner to in times of COVID-19 pandemic in remote communities.
Process/Replication in practice: During the time of pandemic a group of wound care specialists decided to be responsive and looked in the literature[3] for innovative ways to adapt their wound care practice to enhance collaboration between, non-specialized provider, families and patient living in remote communities. They connected to healthcare agencies in remote locations to introduce their new approach and started their collaboration. Over 50 patients have been engaged in the Telehealth Collaborative Approach in Wound Care from August 2020, to November 2021. The use of this approach has helped a general practitioner to speak and engage in collaborative care with a specialist via telecommunications. Both professionals work together to co-manage the patients' wounds and help to improve individuals' health outcomes and well-being.
Outcomes: This new approach has enhanced collaboration among specialized and non-specialized practitioners, patients and families and effectively reduced the number of appointments and the time it takes for patients to be seen by a specialist allowing them to be treated sooner and in the comfort of their home or communities. The use of telehealth in wound has helped to reduce travel time and expenses and facilitated access to wound care specialists when it was unsafe to leave home and communities during the pandemic.

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PI71

An Autologous Blood Clot Accelerate Wound Closure after Stoma Reversal – Case Series

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Topic: Stoma reversal (SR) surgery, although considered as an easy procedure, takes 4-6 weeks to achieve complete wound closure and is associated with potential complications such as an anastomotic leak, hernia formation, and surgical site infections (SSI), with a substantial burden on patients and health care systems[1].
Purpose: Stoma reversal surgery may result in various complications which can increase the length of stay, significant healthcare-related costs, and poor long-term outcomes[1]. SSI

continues to be the most common complication ranging from 2% to 41% [2] and therefore reducing the rate of SSI after SR is a significant unmet need.
An autologous whole blood clot creates at a point of care from the patient's own peripheral blood, creates a protective scaffold that promotes the wound healing process and increases cell granulation, and was suggested to delay infiltration of bacteria into the wound[3].
Objective: Four patients who underwent SR operation and autologous whole blood clot were reviewed. At the conclusion of surgery the wound was left partially opened and 18-24 hours post-operation, blood was drawn from the patient and was mixed with Kaolin and calcium coagulant and immediately injected into the open wound, allowing the blood to coagulate inside the wound to create a blood clot. The patients were followed for signs of infection and closure rate.
Outcomes: Autologous blood clot treatment was applied to 4 patients following SR. Complete wound closure was noticed 3 weeks after the autologous blood clot treatment in all patients with no signs of infection. The autologous blood clot treatment promotes wound healing process and may accelerate the closure of the SR wounds and the risk of infection.

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PI72

Prevention of Skin Injuries in Patients with Acute Respiratory Distress Syndrome during the COVID-19 Pandemic

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Topic: During the COVID-19 Pandemic, clinical practices in the acute care setting changed dramatically. Patients with COVID-19 often developed Acute Respiratory Distress Syndrome (ARDS) that is often treated with prone positioning. Bedside clinicians were faced with the challenge to learn how to manually prone patients.
Purpose: A multidisciplinary team was formed to identify best practices in real time for manually proning patients during the COVID-19 pandemic. A team of clinicians was formed in March 2020 that included a CWOCN, respiratory therapist, critical care clinical nurse specialists, critical care nurses, a pulmonologist, a pharmacist, and a member of supply chain to evaluate products and practices for manually proning patients. Using a PDSA model, it was identified that there was a lack of appropriate supplies and education around the practice of manually prone positioning. The team implemented current best practices and utilized a rapid cycle change to develop best practices across the critical care division. Best practices included supply changes, intense education, and constant monitoring and re-evaluation.
Objectives: A retrospective chart review was performed of patients admitted to ICU and placed in prone position from March 2020-July 2021 for skin injury.
Outcomes: Overall, a 40% skin injury rate was found in this population. Facial injuries were found to be the largest skin injury in our health system and across the state. Many patients placed in prone position ultimately died during the hospital stay. A proning toolkit (including a commercial ETT holder, an educational flier, a fluidized positioner, two flat sheets, wicking pads, and multiple silicone sacral foam bordered dressings) was developed and implemented resulting in an overall HAPI rate to under 30%. This prone positioning education is now part of

annual competencies within the critical care division. Further evaluation of end -of-life injuries or unavoidable injuries should be examined.

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PI73

The nursing shortage and wound care: optimizing role delineation and utilization of the wound care tech

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Topic: The nursing shortage and wound care: optimizing role delineation and utilization of the wound care tech
Purpose: Negative effects of the nursing shortage include stress, decreased job satisfaction, limitations in patient care, burnout, and trauma. These are observed both within direct bedside nursing and wound care teams. The nursing shortage is expected to continue, and clinical teams must adapt.
Objectives: We describe the creation and implementation of an algorithm differentiating role responsibilities amongst inpatient wound care team members: wound care tech, WOC certified nurse specialists, WOC certified advanced practice providers, and beside registered nurses. The setting is an academic health system's community hospital division. Wound consults and follow up needs are triaged according to the algorithm to determine accountability for patient care activities. Utilization of the non-nursing wound care tech role augments the team's ability to provide evidence based advanced wound care. Clear communication of role expectations and delegation in the care of patients with and at risk for wounds optimizes time management, supports nursing practice for the entire care team, and allows clinicians to practice to the extent of their certification and licensure.
Outcomes: A survey was distributed to wound care team members including wound care techs, outpatient registered nurses, inpatient WOC certified nurse specialists, and WOC certified advanced practice providers. Utilization of non-nursing wound support personnel, the wound care tech, was found to support both the bedside nurse and the wound care team. Incorporation of the wound care tech role also increased the time WOC certified nurse specialists and providers were able to devote outside of direct patient care including pressure injury prevention projects. The wound care tech was able to increase the number of patient visits per day, and was also associated with increased job satisfaction for the wound care team.

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PI74

Ileostomy and Colostomy Intubation for Stoma Stenosis

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Topic
Fazio (2017) describes early post-operative stoma stenosis as a cause of bowel obstruction. The swelling and edema of a new stoma combined with a small and tight opening in the abdominal wall may cause this distal obstruction, which presents as an ileus, despite resumption of intestinal activity. Fazio advised that the issue can be treated by intubating the stoma with a Foley catheter, recommending that it stay in place until the stoma edema resolves. The discussion ends there. A recent literature search for the method of intubating a new stoma yielded few results. The most relevant is a document detailing a method for treating ileostomy blockage from the website of The United Ostomy Associations of America (UOAA, 2020). The WOC Society Core Curriculum for Ostomy (2016) includes a version of the UOAA document. Anecdotal reports indicate that some, but not all healthcare facilities call on a properly trained ostomy nurse to perform this important task.
Purpose
To detail safe and effective stoma intubation procedure.
Objectives
To list the required materials, detail patient education, describe the stoma intubation procedure, highlight precautions, and outline documentation points.
Outcomes
Intubation of a stoma can result in 1) immediate production of effluent or gas release, 2) the catheter being advanced into the stoma without immediate output, 3) identification of a kink or point of resistance that cannot be safely overcome, or 4) detection of stoma stenosis at the fascia level.
Stoma intubation may be done in the operating room or at the bedside in the early preoperative period. A well trained ostomy nurse will be prepared to educate the patient, assemble needed equipment, effectively intubate the stoma, know when to discontinue, and, finally, communicate the outcome to the surgical team.

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PI75

An Innovative Combination Ostomy Barrier Seal and Spout to Reduce Peri-Stomal Skin Complications

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Topic: Seventy-five percent of all adverse events associated with patients with an ostomy are related to peristomal complications (PSCs).[1] While most PSCs are classified as peristomal moisture associated dermatitis (PMASD) from leakage under the skin barrier, mechanical device related skin injury has also been reported (MARSI).[2] Rings and seals are the most commonly employed intervention to offset PSCs, followed by convexity.[1] The lack of significant innovation using these products for managing and preventing PSCs have limited intervention options, though the literature is reporting these advances.[3-5]
Project Purpose: A newly available barrier seal designed with an assisted flow mechanism to divert effluent was initiated on patients with PSCs or at risk for PSCs due to peristomal topography or stomal construction.
Objective: This practice innovation reports both the patient/significant other perception and healthcare provider experience with this novel barrier seal using a 1-5 Likert Scale and noting additional comments to evaluate ease of use and evaluation of peristomal skin condition.
Outcomes: All patients reported ease of use as 4.2 on a 1-5 Likert Scale with positive comments specifically addressing improved quality of life and reduction in PSCs. Significant others assisting the patient with an ostomy rated these factors at 4.8. Nurses initially rated ease of use experience at 3.9, improving to 4.3 after four weeks. These same providers rated high satisfaction (4.7) with peristomal skin condition. Use of an innovative combination ostomy barrier ring with an assisted flow design is a viable option to prevent and manage peristomal skin complications by directing effluent flow into the pouch, supporting the existing literature reports.

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PI76

Making Our Bed: WOC Nurse-led Initiative to Replace Aging Hospital Beds to Decrease Pressure Injuries

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Topic: Hospital-acquired pressure injuries (HAPIs) have a significant impact to the hospital's performance metrics as well as serious repercussions on the hospital's finances. The Wound, Ostomy and Continence nurses (WOC Nurses) at a 530 bed Level II Trauma Center in the Midwest noticed a relationship between the state of the support surfaces and the development of HAPIs. On average, patients spend 83% of their time on hospital beds and the state of the hospital beds is an often-overlooked extrinsic factor in the development of HAPIs. Bed selection, as a preventative and supportive component of pressure injury management, is substantially hampered by ineffective, poorly functioning bed support surfaces. WOC nurses can play a vital role in the process of selection and replacement of hospital beds.
Objective: To facilitate the implementation of a process for replacement and selection of support surfaces with features that are effective in preventing HAPIs.
Process: After gathering data and performing a root cause analysis within their hospital, the WOC Nurses were able to determine the relationship between the incidence of HAPIs and the aging beds. The major factors were the 10-year-plus age and lack of maintenance of the bed support surfaces. By engaging key administrators during the annual Quality and Safety report, the WOC Nurses were able to facilitate discussions regarding the role of hospital's bed fleet in correlation with HAPIs. Subsequently, the data analysis resulted in broadening the scope of the initiative and expanding the initiative into a system-wide program for the selection, standardization and replacement of the bed fleet for all eight hospitals.
Outcomes: By changing attitudes regarding the role of the hospital's bed fleet in causation of HAPIs, WOC Nurses became essential leaders in the process of replacement, selection and implementation of new hospital beds with features that are effective in preventing HAPIs.

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PI77

Implementation of medical device related pressure injury prevention protocols: Prophylactic foam dressing prone packets for COVID-19 patients in the ICU

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Topic
Medical device related pressure injuries (MDRPI) occur more quickly following admission to a facility than other types of pressure injuries. 51% of all MDRPIs occur on the head and face, which is especially significant to the COVID-19 patient population due to prone positioning to manage manifestations of adult respiratory distress. However, proning carries with it the increased risk for pressure injury.
Literature suggests that placing a patient in the prone position for 12 hours or longer without appropriate pressure injury prevention intervention puts the patient at risk for pressure injuries. Therefore, creative solutions may be necessary to mitigate the risk for pressure injury in patients that require placement in the prone position.
Purpose

This MDRPI prevention protocol provides guidance to caregivers for the application of polyurethane foam multilayer dressings on pressure points of the face, anterior, and posterior body for COVID-19 patients undergoing positioning to support lung function, to include proning.

Objectives

A MDRPI prevention program was implemented using a one-step prophylactic foam dressing packet for proned COVID-19 patients in the ICU.

The packet includes dressings for the bilateral cheeks, bridge of the nose, bilateral shoulders, hips, knees, sacrum, and heels and includes an educational flyer to guide dressing placement and protective skin wipes. Nursing staff were educated to utilize a prone packet for all COVID-19 patients with provider orders to initiate prone positioning.

Outcome

MDRPI in the intervention period were compared to same period previous year. Fisher Exact Test was used to calculate statistical significance.

Between Aug-Nov 2021, 115 COVID-19 positive ICU patients qualified for the intervention. One patient developed a facial MDRPI (0.8% incidence), compared to Aug-Nov 2020 pre-intervention period, where 12 out of 133 COVID-19 positive ICU patients (9% incidence) developed facial MDRPI, a reduction of 91% ($p<.005$).

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PI78

Using a Novel Breathable Silicone Gel in Stomal and Peristomal Skin Management

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Topic: Ostomy accessory items such as hydrocolloid pastes, barrier strips and rings are commonly used in both prevention and management of peristomal skin alterations caused by abdominal topography (e.g. creases, folds or parastomal hernias) and stomal complications (e.g. mucocutaneous separation). Traditionally composed of hydrocolloid materials combined with an adhesive, these are associated with skin stripping, and often lead to residual material on the skin.[1] Additionally, hydrocolloid materials swell as they absorb moisture and adversely impacting skin health. While soft silicone has been used in wound management, the leap to its use in ostomy accessories has been limited to barrier wipes. Recent advances in biomaterial technologies, soft silicone is available in a gel formulation to address these issues.[2-4]

Project Purpose: A soft silicone gel was evaluated on patients with deep abdominal topography creases and in patients with mucocutaneous separation as an alternative to traditional hydrocolloid accessory items.

Objective: This practice innovation reports the application and evaluation of transitioning to soft silicone gel from traditional hydrocolloid accessories for the use in the management of patients with stomal complications and/or abdominal topography challenges

Outcomes: Use of soft silicone gel alone or with traditional hydrocolloid materials prolongs faceplate weartime, allows visualization of stomal complications such as mucocutaneous separation, prevents the buildup of residual materials on the skin, and decreases pain, supporting reports in the literature.[3,4]

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PI79

Decision Framework for Enteric Fistula Management

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Topic
Enteric fistulas and poorly sited ostomies can challenge patients and providers on multiple fronts. Caring for adjacent wounds, controlling effluent, preventing leaks, and maintaining a positive attitude can all be problematic. Furthermore, these wound types can many times leave the patient bound to a care facility, with skin breakdown related to effluent leakage resulting in moisture-associated skin damage and readmission to an acute care hospital.
Objectives
We present a decision framework used by the complex abdominal reconstruction service (CARS) to help providers determine the appropriate therapy when faced with a challenging enteric fistula. Because patient presentation changes over time due to complications and/or wound healing this framework is reviewed periodically to determine when there should be a change in therapy.
Process
The cross-functional CARS team including a surgeon and CWON assesses patients according to the SNAP methodology: Skin and Sepsis, Nutrition, Anatomy, and planned surgical Procedures. The team assessment also includes the presence of adjacent wounds and patient pouchability. These factors are all considerations in the decision hierarchy presented here. Patient assessments considering the decision framework results in one of three therapy decisions:

- Negative Pressure Wound Therapy (NPWT) using a fistula isolation device
- Bolstered pouching
- Soft tissue revision and skin grafting around the stoma

Outcomes
We present enteric fistula and ostomy patient cases illustrating the application of the decision making tool and the therapies applied. Therapies presented include NPWT, pouching, and skin grafting. In all cases the patients were assessed by the CARS team and therapies were applied based on the decision making framework.
This framework highlights the need for a multidiscipline approach for managing enteric fistulas. Applying the decision making tool with team-based assessment to improve patient quality of life, decrease hospital stays and enable patients to return to home.

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PI80

Ostomy Passport to Success: A Novel Approach to Post-Operative Ostomy Education

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Title: Ostomy Passport to Success: A Novel Approach to Post-Operative Ostomy Education
Purpose: Ostomy education is an important component of healing after ostomy surgery. People who can successfully manage ostomy self-care may reduce hospital length of stay; reduce frequency of ostomy-related complications; and reduce frequency of hospital readmissions (Harris, Kelly & Parise, 2020). WOC nurses provide an average of one two-hour education session prior to discharge. Our team wanted to increase opportunities for patients to build ostomy-related skills and confidence.
Process: The WOC nurse team created an ostomy passport, a series of short, structured education sessions for basic ostomy information and skills in a pamphlet based on best practice guidelines (Prinz, Colwell, Cross, Mantel, Perkins, & Walker, 2015). We designed the passport to be given over four days. Starting post-op day one, the passport is used daily promoting one new skill each day until discharge. To maximize flexibility, unit-based clinical nurses lead the patient in daily passport activities. WOC nurses continue to provide a comprehensive education and skills session.
The passport and nursing education were trialed over six weeks on two adult care units. Clinical nurses were given an anonymous ostomy self-assessment before and after they were trained to use the passport. Patient satisfaction surveys were collected during the trial.
Outcomes: 28 nurses completed the ostomy skills self-assessment before receiving passport education; 17 nurses completed the post-intervention self-assessment with an almost 5% improvement. Seven patients received a new ostomy during the trial; five ostomates responded to the satisfaction survey. Patient responses were favorable (average response 4.5/5 on Likert scale). Two patients requested a Spanish language passport. Following the successful trial, the passport was translated into Spanish, and implemented throughout the organization. The ostomy passport was built into the patient care plan in electronic medical record.

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PI81

Survey of Clinical Practice In the Post-operative Period: Assessing the Use of a Convex Pouching System

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TOPIC: Effluent leakage and peristomal skin complications (PSCs) are common[1] and impact the quality of life of ostomy patients[2]. Convex pouching systems can be used to effectively manage leakage in many cases; however, for some clinicians there is uncertainty in using convexity in the post-operative period[3].
PURPOSE: Identify the current use of pouching systems in the post-operative period by clinicians caring for ostomy patients.
PROCESS: A 23-question cross-sectional survey was used to assess the experience of clinicians who care for ostomy patients.
OUTCOMES: Responses were received from 332 US-based clinicians (82% ostomy-certified nurses, 7% surgeons, and 11% non-certified nurses) who reported 40% of their case load were ostomy patients. They reported that 47% of their patients experienced PSCs in the last year and 98% agreed that PSCs are primarily caused by leakage. When asked about agreement on the definition of the post-operative period definitions, 90% agreed that post-operative period was defined as immediate post-op (days 0 – 8); post-op (days 9 – 30); and transition phase (day 31 – 6 months).
Consistently high leakage was observed by the respondents over all post-operative time frames, whereas observation of PSCs increased (~30% – >80%) over time. Ninety-four percent of respondents agreed it is important to choose the most appropriate pouching system, including convexity, in the immediate post-operative period to prevent leakage and PSCs. Additionally, 79% of the respondents indicated they would use a convex pouching system any time following stoma creation.
CONCLUSIONS: Clinicians with ostomy experience report they would prescribe convex products to secure a consistent pouch seal and help prevent leakage and/or PSCs, which is important for improving clinical outcomes in patients with a new ostomy. The majority of clinicians are in agreement that a convex pouching is an appropriate option for use within the first 30 days after stoma creation.

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PI82

Expert Panel Review of Care Practices Associated with At-Risk-Skin

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Topics/Significance to Practice: Skin moisturizers are available in lotions, creams, ointments, and gel formulations for at-risk-skin. Several literature reviews cite the difficulty in identifying differences between moisturizers affecting application and dosage recommendations.[2, 3] A proactive approach needs to be taken to guide appropriate moisturizer use and preventative care for at-risk individuals with fragile skin.[4]
Purpose of the innovation/objectives: A panel of nine skin care experts were assembled to address the current status of skin care and definition of at-risk-skin. We report on the current deficiencies in the at-risk-skin population and the recommendations of the expert skin care panel.
Process/replication: Consensus statements addressing at-risk-skin care practices were developed. Existing strategies for at-risk-skin care were discussed including preventative skin care measures, types of skin care products, moisturizers, barriers, ingredients, intended use of the products and data comparing skin care product purchasing patterns to the number of residents in a facility. The panel members also reviewed organizational approaches and educational resources related to at-risk-skin practices. Each statement was reviewed independently until 100% consensus was reached by all nine panel members.
Outcomes: A total of 21 at-risk-skin care consensus statements were developed. Six consensus statements identified skin strategies, ongoing skin assessment, risk mitigation, and personalized product category requirements. Ten consensus statements identified the appropriate use of skin moisturizers and skin barriers, frequency of application, and dosage. Five consensus statements addressed organizational guidelines, best practices, standardized formulary products category recommendations and skin care education.
Conclusions/Implications for Practice: A total of 21 consensus statements were developed to address the needs of at-risk-skin care for prevention of skin damage and improved evidence-based care.

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PI83

Building a Smarter Wound Consult Order: Doing More with Less

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Topic: Building an efficient consult order set to maximize efficient wound consultations
Purpose: WOC nurses are in short supply and have increasing responsibilities as we settle into a "new normal". At our large academic quaternary medical center in metropolitan Northeast USA, wound consults have increased particularly as we have had new interns and a shift in nurse staffing mix and ratios. Wound consults were being entered into the EHR without complete information causing delay in triage. Nursing staff would sometimes delay initiating care while awaiting a consultation rather than starting wound care based on pre-established evidence-based guidelines.
Objectives:
1. To build a smarter electronic health record order panel that would empower the provider to fill in mandatory fields of minimally-necessary information (e.g. wound location, reason for consultation, presence of clinical photography) in a time-efficient, multi-select format with additional fields to prompt discussion about the skin and history of wounds during assessment of the total patient by primary team.
2. To build a wound care order that would allow the staff to begin wound care for all wounds based on the clinical presentation/wound type.
3. To standardize wound care consultations/referrals so that there was one process for requesting a patient consults and so that providers wouldn't have to decide which one of the many teams at our academic medical center that see wounds should be consulted.
Outcomes: A smarter order panel was build including a Consult order with mandatory fields needed for an efficient triage, a prompt to obtain baseline clinical photography and optional fields to prompt a discussion between the patient and the provider about the history/presence of alterations in the skin and wounds. This allowed for one process to obtain time-efficient triage of wound consultations and connected two core teams of wound care experts for 7-day a week coverage.

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PI84

Lessons Learned From a Pandemic: Standardization in Prone Positioning Across an Enterprise

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Topic: Standardizing Prone Positioning Subject Matter Experts, Products, Process and Access in a time with less resources both physical and personnel
Purpose: In metropolitan Northeast USA, at a large academic quaternary medical center and additional hospitals within the IDN, each wave of Covid-19 pandemic during 2020 used a different combination of products while the patient was in the prone position. Additionally, different subject matter experts were sought during each wave and on each hospital site. Products were scattered and varied in their use.
Objectives: In preparation for potential future waves to fight Covid-19 and use of prone positioning for extreme respiratory failure, we sought to create a "Prone Standardiation Group" with subject matter experts identified at each campus (finite), established pressure redistribution products for use based on pressure mapping pilot (using 6 body types and 3 combinations), standardized preventative products within a kit and finally operationalizing key considerations.
Outcomes: Group was standardized to include WOC nursing, critical care MD, critical care nursing leadership and bedside nursing consultants who were experts from previous pandemic wave. A standard was updated, a best practice bundle was created and an exemplar prompting environmental set-up to reduce injuries was drafted.

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PI85

Assessing Darker Skin Tones: Meeting the Needs of All Patients (PDSA Cycle 2)

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Topic: Providing support to clinical staff in their assessment of alterations in darker skin tones to promote equity in care and inclusion
Purpose: A pilot project performed on a critical care surgery floor noted a deficit in knowledge as to how to assess alterations in darker skin tones. Injury to the skin was found after it was an evolving deep tissue injury in several cases. Existing education resources only showed injury examples on lighter skin tones. The purpose of this project was fill the gaps in knowledge and provide resources that could be referenced during clinical practice.
Objectives:
1. Form a team of subject matter experts across the enterprise representing each hospital site.
2. Review racial make-up of our patients to determine scope (create an on-demand report to monitor the scope).

3. Supplement existing physical references with examples of darker skin tones (Pressure Injury Staging Guide).
4. Add education on darker skin tone assessment to our annual pressure injury staging module, GME education, nursing orientation modules and one-page resource for reference.
5. Create proprietary resource to be used for assessment of alterations in skin on darker skin tones for earlier identification of alterations.
Outcomes: All of the above were met. Next steps are to find a more sustainable material in this sourcing climate that can be used to manufacture more resource cards to repeat the pilot with more support.

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PI86

Elastomeric Skin Protectant Use on Periwound Skin Reduces Pain and Itchiness: A 10 Patient Survey

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TOPIC: Fragile periwound skin is prone to breakdown and can contribute to patient discomfort during care.1,2
PURPOSE: As periwound skin health can contribute to wound integrity and patient comfort, it should be assessed throughout wound care and protected from potential damage. Ten consecutive patients rated periwound skin pain and itchiness before and after the initial application of an elastomeric skin protectant.
OBJECTIVES: Ten consecutive patients presented for care and provided written, informed consent. Patients and wounds were assessed. Antibiotics were given, if necessary. Patients reported periwound skin pain and itchiness on a 10 point scale prior to and after the first elastomeric skin protectant application. Wound care dressings with or without compression socks or wraps were used. Dressing changes ranged from 1 to 7 days. If needed, the elastomeric skin protectant was reapplied every 3-7 days.
Outcomes and Conclusions: Ten consecutive patients were included. Average patient age was 56.1 ± 18.4 years. Wound types included traumatic (n=3), venous leg ulcer (n=3), arterial ulcer (n=1), diabetic foot ulcer (n=1), surgical dehiscence (n=1) or abscess (n=1). Prior to elastomeric skin protectant application, periwound skin pain averaged 5.6 ± 1.1; while periwound skin itchiness averaged 6.6 ± 1.6. All patients showed periwound skin improvement after elastomeric skin protectant use was initiated. Following elastomeric skin protectant application, periwound skin pain was significantly reduced in 9/10 patients (4.2 ± 1.0, p=0.0001). Additionally, periwound skin itchiness was significantly reduced in all 10 patients (3.6 ± 1.0, p=0.0001) after elastomeric skin protectant use. In these 10 patients, elastomeric skin protectant use under wound dressings with or without compression resulted in improved periwound skin and a reduction in pain and itchiness. Pain reduction was likely due to increased patient comfort as the skin protectant does not have analgesic properties.

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PI87

WOC nurse team on demand: Using an intranet website to provide accessible education and support

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Topic/Significance to Practice—In a large 1147-bed university and children's hospital across four campuses, 7 certified WOC nurses aren't available to meet the education and support needs of 2306 adult care nurses and 1214 pediatric nurses, as well as physicians, case managers, nurse leaders, and other staff. The WOC nurse team intranet website provides an on-demand responsive resource to bridge that gap.
Purpose of the Innovation/Objectives—WOC nurses are not always available to answer questions, troubleshoot, or teach skills. We wanted an accessible and engaging space for nurses and staff to find resources to support their skills and grow knowledge on-demand. We also wanted to address the multiple generations of nurses with varying learning styles and differing levels of experience and knowledge about wounds, skin care, pressure injury (PI) prevention, ostomy care, and negative pressure wound therapy (NPWT).
Process/Replication and Outcomes—Our organization supports an intranet portal for staff information and support. Our team requested and received permission to create a website in the clinical support section of the portal. The website includes a WOC team staff roster and contact information and separate pages for NPWT, ostomy care, wound care, PI prevention, and staff education. Within the NPWT, ostomy, PI, and wound care pages are product formularies, including photos and descriptions of each product with central supply number, and videos demonstrating techniques and product use. The staff education page includes archives of in-services about skin, wound, ostomy and PI prevention topics. The website is updated whenever new information is available and in response to user feedback.
The WOC team website receives an average of 50 visits per month. Skin care champions and staff nurses report website use to WOC nurses. Nurses find videos, especially ostomy care and NPWT troubleshooting, particularly helpful. Multiple modalities support individual learning needs.

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PI88

Seeing is Believing: Driving Outcomes, Improving Documentation, and Increasing Patient Satisfaction with Long Wave Infrared Thermography

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Topic: Pressure injuries (PIs) are a well-known source of significant pain and distress for patients, families, and caregivers. Hospital acquired pressure injuries (HAPIs) have been increasing nationally. And long-term acute care hospitals (LTACHs) continue to report the highest prevalence and incidence rates[1].
Purpose: To help reduce HAPI rates and to increase healing rates of all PIs, including those present-on-admission (POA), a 23-bed LTACH implemented the use of Long-Wave Infrared Thermography (LWIT) into their HAPI reduction and healing protocol.
Objectives: As part of the admission skin assessment, LWIT images were taken of the intact skin over high-risk areas (sacrum and heels) to detect non-visible physiological changes indicating s/s of POA deep tissue pressure injuries (DTPIs), as well as imaging the visible PIs to establish baseline status. PI prevention bundles, and treatment plans were implemented based on LWIT objective findings. Repeat LWIT images were taken weekly to reassess progress and reevaluate treatment plans.
Outcomes: During the 75-day trial this facility was able to accomplish a HAPI rate of zero and increased its overall PI healing rate by 56% after implementing LWIT imaging. Prior to implementing LWIT imaging, the 10-month prior monthly average HAPI rate was 4.5% and the healing rate was 25% (July 2020 to mid-April 2021. By utilizing LWIT imaging as part of the skin assessments, the LTACH was able to reduce HAPI rates to zero and increase the healing rates of pressure injuries by utilizing the LWIT objective data to evaluate wound progression and treatment plans. Further benefits identified beyond the improved patient care outcomes were the increased patient, family and staffing compliance to treatment plans with overall satisfaction with care changing the culture within the facility.

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PI89

Picture the Colorectal Incision to show physiologic findings of delayed healing with Long Wave Infrared Thermography (LWIT)

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Topic
The risk of infection after colorectal surgery is threefold compared to other sites.[1] Surgical-site infection (SSI) after enterostoma closure has been reported at 2%–41%.[2] Delayed detection of SSI results in prolonged recovery and higher costs.[3]
Purpose
Indicators of delayed healing may not be visible in the initial stages; temperature, another indicator of delayed healing and infection, can be subjective and challenging to assess with a gloved hand.
The purpose of this work is to use Long Wave Infrared Thermography (LWIT) to assess the colorectal incision via infrared feedback and provide pathophysiologic findings.
Previous research determined delayed healing can be detected using LWIT within the first four days after surgery of Colorectal patients.[3]
Objectives

LWIT images of the incision were taken at the bedside as part of the nursing assessment to assess healing delays. The LWIT software measured the temperature differential of the incision and surrounding skin.
Adequate blood supply within the wound bed is required to deliver oxygen and to sustain normal healing. Cold spots along the surgical wound indicate poor blood supply, leading to delayed healing[4]

Outcomes

These three cases show a thermally cool area along the distal incision prior to visible infection or dehiscence. Case one showed a progressing cool spot with serial images. Case two also showed incisional coolness and dehisced the following day with positive MRSA cultures. Case three visually showed minimal inflammation and thermally showed a vast inflammation spreading beyond the incision line and a cooler area at the distal incision.
Along with the clinical history, LWIT imaging can be an adjunct to support the assessment of incisional site healing. Delayed healing could be identified (by lower temperatures) prior to dehiscence or discharge.

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PI90

Improving Four Eyes in Four Hours (4E4H) Admission Skin Assessments Using Visual Reminders

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1. Topic:
Improving Four Eyes in Four Hours (4E4H) Admission Skin Assessments Using Visual Reminders
2. Aim/Purpose:
The aim of this quality improvement project was to increase the completion rate of the 4E4H admission skin assessments by RNs from 50% to 100% by implementing 4E4H visual reminders placed on the computers used for documentation, and reminder posters placed in staff break rooms.
3. Objectives:

- Establish a 4E4H Skin Assessment Task Force
- Design 4E4H visual reminders to grab attention, highlighting the 4E4H admission skin assessment and pressure injury prevention protocol.
- Deliver 4E4H educational sessions to nursing staff on the importance of the 4E4H admission skin assessments in pressure injury prevention and in capturing present-on-admission pressure injuries.
- Conduct weekly chart audits for four weeks to collect data on documentation of 4E4H admission skin assessments by nursing staff after implementation of visual reminders.
- Analyze 4 weeks of the 4E4H chart audit data to compare the completion rates of 4E4H admission skin assessment before and after implementation of visual reminders.

4. Outcomes:
The 4E4H completion rates demonstrated no sustained improvement during the project. The average 4E4H completion rate over the 4-week study period was 50% which was the same

completion rate as the baseline completion rate used in this project. Although the results of this project did not meet the aim for improving 4E4H admission skin assessment documentation to 100%, the assigned nurse 4E4H completion rate was nearly 100% every week of the project. The second nurse documentation performance negatively impacted the results but did show improvement each week with the exception of the fourth week of the project. These findings highlight the need for continued focus and future innovations to improve documentation of the 4E4H admission skin assessments with the overarching goal of preventing hospital acquired pressure injuries on this intensive care unit.

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PI91

Accelerating Wound Care Competency Development, Management and Documentation

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Topic: Wound care professionals will continue to be in demand, as the population older than 65 years is projected to grow by 25% by 2060.[1,2] Wound care clinicians usually have diverse training/experience/background, which can lead to inconsistent care and result in poor outcomes.[3,4] To standardize and improve healthcare professionals' knowledge level, the Joint Commission recommends developing a competency program.[5] However, consistently ensuring clinicians' competency is difficult, given time and resource constraints.
Purpose: We aimed to create a solution to overcome obstacles in wound care competency development, management and documentation.
Process: Using the Design Thinking methodology, the solution was created as a module within a clinical/reimbursement decision support web-application** for wound care/hyperbaric clinicians:

- Managers/clinicians' needs, and role-based competency areas were mapped
- Use cases were prioritized; workflows were designed
- Evidence-based competency templates were created incorporating user feedback

Outcomes: The module is a cloud-based, mobile-responsive solution that allows programs to build their own competencies or customize role-specific wound care competency templates to onboard/train staff and manage clinician's competencies. Use cases include:

- Onboarding/orientation: provision of initial training and information while assessing the competence of clinical staff relative to job responsibilities
- Competency management: strengthening of knowledge, skills and ability in wound care areas of competence relevant to each role (e.g.medical assistant/nurse/nurse practitioner/ physician/etc), with documentation of preceptor feedback/oversight, pre- and post-assessment.
- Clinical internship for professional certification: provision of framework/documentation of clinical internship required for certification (e.g.of hyperbaric technologists).
- Remote training: assignment of modules (e.g.debridement, compression) coupled with preceptor's teleassistance.

A solution to accelerate wound care competency development, management and documentation was created. Users' reported benefits include care standardization, increased efficiency in employee onboarding/orientation, and ability to track competencies for employee development, licensure, certification and facility accreditation.

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PI92

It takes a Village: A system-wide holistic approach to reducing pressure injuries

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Topic/Introduction: A pressure injury (PI) is a localized damage to the skin and underlying soft tissue usually over a bony prominence.[1] Hospital-acquired pressure injuries (HAPI) that may be associated with pain, infection, and sometimes death are generally considered preventable and are accepted nursing quality indicators.[2, 3] Education and competence of nurses may impact the development of HAPIs in their patients.[4] Our health and wellness organization partnered with a global manufacturer and distributer of medical supplies in an effort to develop and deliver a quality improvement educational program to our nursing staff with the aim to reduce HAPIs.

Purpose: This program aimed to educate our nursing staff so that they have the same baseline knowledge about HAPIs. As part of the program, virtual training sessions with targeted units and personnel were conducted. Ninety-eight % of nursing staff including registered nurses (RN), licensed practical nurses (LPN), and nurses' aides (NA) were trained; the nursing staff comprised of 847 NAs and 2860 RNs and LPNs. There were approximately 226 education sessions including 4-hour and modified 2-hour programs. This program was also designed to provide a holistic view of performance combining HAPI incidence and supply utilization, and comparing with the established baseline.

Objective: To assess the quality improvement educational program with emphasis on reduction in HAPIs and other pertinent factors.
Outcomes: This effort resulted in approximately 26% reduction in HAPI over a 9-month period. After implementation of the program, utilization of unwarranted medical supply items reduced from 327 to 62; the participants were able to list and define pressure injury stages and identify populations at risk for pressure injuries. Participants provided favorable evaluations that helped to determine the positive impact of the program and ensured professional development of the nursing staff. The education continues with all new nurses in orientation.

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PI93

Retrospective Real World Comparative Effectiveness of Ovine Forestomach Matrix* and Collagen/Oxidized Regenerated Cellulose^ in the Management of Diabetic Foot Ulcers

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1. Real world data study comparing healing outcomes of diabetic foot ulcers (DFUs) treated either with an extracellular matrix or a reconstituted collagen product.
2. Deciphering the relative efficacy of various treatment modalities for wounds such as DFUs has proven to be challenging for clinicians. Retrospective real-world data studies have emerged as an innovative method to evaluate treatment efficacy in challenging patient cohorts who otherwise would likely be excluded in strictly designed randomized controlled trials (RCT). The purpose of this retrospective pragmatic RWD study was to directly compare the healing outcomes of DFUs treated with either ovine forestomach matrix (OFM) or collagen/oxidized regenerated cellulose (collagen/ORC).
3. The two cohorts consisted of DFU treated with OFM (n=1150) and collagen/ORC (n=1072). Data was extracted from a wound database from 2014 to 2020, representing 449 wound care centers across the United States. Data was extracted from a pool of 31,883 wounds and filtered based on the inclusion and exclusion criteria. The median time to wound closure and the percentage of wounds closed standard intervals were estimated using the Kaplan-Meier method. The percentage of DFUs closed were statistically compared between treatment groups using Greenwood's standard error estimates.
4. A sub-analysis was performed to understand the relative efficacy in DFUs requiring longer periods of treatment and showed that OFM-treated DFUs healed up to ~5 weeks faster in this subgroup of more challenging wounds. The percentage of wounds closed at 12-, 24- and 36-weeks was improved in OFM-treated DFUs relative to the collagen/ORC cohort. The results of this large RWD study supports the clinical efficacy of OFM in the treatment of challenging DFUs. Further, real-world data studies should be considered an impactful study design in wound healing as RWD studies can more accurately reflect the actual patient population suffering from complex wounds compared to RCTs.

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PI94

Cost-Effectiveness of Hypochlorous Acid Preserved Wound Cleanser versus Saline Irrigation in Conjunction with Ultrasonic Debridement for Chronic Wounds

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Introduction
Mechanical debridement of chronic wounds with low-frequency ultrasound has been shown to promote wound healing.[1] Saline is typically used as irrigation. An alternative, hypochlorous acid preserved wound cleanser (HAPWOC) provides antibacterial and non-cytotoxic irrigation to the wound. The objective of this study was to determine the cost-effectiveness of HAPWOC compared to saline for use in ultrasonic debridement of chronic wounds.
Methods
A patient-level microsimulation model was used to conduct a cost-effectiveness analysis from the US health system perspective. All clinical data was obtained from a prospective clinical trial.[1] Cost data were obtained from the publicly available data sources in 2021 USD. The effect measure was the avoidance of wound related complications at 14-days post-debridement. The primary outcome was the incremental cost-effectiveness ratio (ICER). The secondary outcomes were the number needed to treat (NNT) and expected cost per NNT to avoid one complication. Deterministic and probabilistic sensitivity analyses (PSA) were performed to gauge the robustness and reliability of the results.
Results
The ICER for HAPWOC versus saline irrigation was $90.85. The expected incremental cost per patient and effect was $49.97 and 55% relative reduction in complications. The NNT was 2 and the cost per NNT was $99.94. The deterministic sensitivity analysis revealed that the model was most sensitive to the cost of HAPWOC and least sensitive to the complications associated with the use of saline. The PSA revealed that all model iterations were cost-effective below a willingness-to-pay threshold of $100 per avoided complication.
Discussion
HAPWOC appeared to be a cost-effective strategy for the treatment of chronic wounds during ultrasonic debridement. For every two patients treated with HAPWOC, one complication was avoided. Given a cost of complication from anywhere between $366 and $7,308 HAPWC was expected to provide an overall net savings to the health system for every two patients treated.

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PI95

A scientific review of the chemistry of wound healing and hypochlorous acid, why purity of the molecule in a wound cleansing solution matters and why hypochlorite is no longer a must use ingredient.

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Objective: Chlorinated species such as molecular chlorine, hypochlorous acid, and sodium hypochlorite all have antimicrobial properties, yet these differ in the cellular response they elicit, which is important in the context of wound healing. The purpose of this study is to review the laws of physical chemistry, and published literature to reach conclusion on the most desired species from the three mentioned here.
Methods: We did a survey of published literature on two key subjects, which is the toxicity of hypochlorite anion, which is present in Dakin's solution as the predominant species, and hypochlorous acid solutions. In particular we were interested in solutions that have very low concentrations of the hypochlorite anion (commonly present in Dakin's solution or bleach) and solutions that have hypochlorous acid above 250 ppm which is present in some wound solutions where the concentration of hypochlorous is the highest amongst commercially available products.
Result: The cytotoxicity of the hypochlorite species is well published. This cytotoxicity was observed in Dakin's solution that was diluted to 0.00005%, which corresponds to 5 ppm. Hypochlorous acid, too, can be cytotoxic, at very high concentrations, however, at 250 -350 ppm seems to be completely benign. The antimicrobial preservative efficacy at that 250-350 ppm hypochlorous acid is high, with most tested bacterial and fungal species tested perishing in a matter of 15-30 seconds.
Conclusion: Eukaryotic cells have protective mechanisms to be able to handle hypochlorous acid at a concentration such as 250-300 ppm. Prokaryotes such as unicellular microbes have not evolved to be protected against hypochlorous acid. However, eukaryotic cells do not seem have protective mechanisms against the hypochlorite, even at low concentrations, and thus are affected by the presence of hypochlorite anion.

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PI96

Patient Compliance and Avoidable Healthcare Costs Associated with Compression Therapy for the Treatment of Lower Extremity Edema

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Introduction: Multi-layer compression therapy is the gold standard for treatment of patients suffering from lower extremity edema with an ulcer or wound. However, non-compliance with compression therapy results in reduced wound healing rates and substantially longer time to achieve complete healing. The objective of this study was to estimate the potential savings of increasing compliance with a novel compression therapy, in which both layers provide compression.

Methods: A patient-level simulation model was developed to estimate the expected savings as result of increasing compliance with compression therapy. Healthcare costs included were the excess costs associated with a non-healing wound and daily wound treatment costs. Clinical and economic data were obtained from the published literature. Two scenario analyses were performed to assess the expected savings of increasing compliance to the highest rate reported in the literature.
Results: The potentially avoidable healthcare costs between a compliant and non-compliant patient was $7,576 (SD $1,004; range: $4,762 to $10,863) based on estimated 44% reduction in time to healing and 20% increase in likelihood of healing at six-months. The highest reported compliance rate was 95% based on results of a study utilizing a novel two-layer bandage system. The scenario analyses revealed that the expected per patient savings of increasing compliance was $3,969 (SD $510) and $1,140 (SD $153) for Scenario 1 (baseline to maximum reported compliance rate) and Scenario 2 (second highest compliance rate to maximum reported rate), respectively.
Conclusion: Increased compliance with compression therapy for venous leg ulcers was expected to substantially decrease healthcare costs. Correspondingly, novel compression bandage systems where both layers compress, that have been shown to have a high patient compliance rate may save substantial dollars.

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PI97

Delivering a consistent and evidence-based approach to convexity product selection

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Topic:
Convexity appliances help in the management and/or prevention of complications, which may be from output from the stoma seeping under the appliance adhesive[1]. Convex appliances are designed to apply pressure onto the skin surrounding the stoma, which increases the protrusion and improves the seal between the appliance and the patient's skin, thus reducing the risk of leakage.
Purpose:
The use of clinical assessment tools and guidance is recommended by both the WCET® International Ostomy Guideline[2] , a convexity guidance document has been published by the ASCN[3] recently. An audit of convexity considerations amongst stoma care nurses, highlighted variations across current practice, these results will be shared.
Objectives:
The ASCN guidance has been adapted to provide a patient-centric focus, ensuring a consistent approach to the completion of the clinical assessment undertaken prior to the introduction of convexity.
Outcomes:
The checklist includes the patient's history, assessment of the stoma, peristomal skin and abdomen as recommended by the guidance. The inclusion of a yes/no tick box provides an effective visual tracker to ensure all relevant points are assessed. In addition, the introduction of visual icons, as hazard risk markers highlight the risks associated with the use of convexity. As the most significant risk of the use of a convex product is the sustained pressure applied to the localised area, classified as a medical device-related pressure injury[4]. The checklist audit confirms its suitability for use in clinical practice and these results will be shared.
Clinical reflection enables us to adopt new clinical approaches. The use of a checklist may not be needed by all; however, its use may provide the clinician with confidence that they are delivering competency based practice, evidenced by documentation which can be used as an educational support for their colleagues, ultimately driving an advance in clinical practice.

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PI98

Consensus Guidance on When to Choose a Convex Pouching System in the Post-Operative Period

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Topic: Convex ostomy pouching systems have been available for decades[1]; however, uncertainty remains over the use of convexity during the post-operative period[2,3]. A group of ten ostomy health care providers reached consensus on a set of recommendations for the use of convexity after surgery.
Purpose: Develop consensus on when to choose a convex pouching system in the post-operative period.
Methods: A Modified Delphi Process was utilized to identify themes from the literature and reach consensus on the use of convex pouching systems in the post-operative period. The approach included an anonymized survey of ostomy experts to determine current use of convexity in the post-operative period, a scoping literature review, and a series of expert panel discussions guided by an unbiased facilitator, who ensured equalized input from all panel members, to develop consensus on the post-operative use of convexity.
Outcomes: Consensus was reached on the following statements: the goal is to secure a reliable predictable wear time; a convex pouching system can be used safely at any time; a belt should only be introduced when convexity does not provide a secure seal; convexity should be considered for use in the immediate post-operative period to ensure a secure, consistent, reliable and predictable seal and reduce the risk of leakage; follow up by a ostomy nurse specialist should occur within the first two-weeks post-discharge and after a product change; patient assessment should include: type and characteristics of the stoma, stoma output, patient peristomal body profile, peristomal topography, peristomal skin condition, patients management ability and physical activity levels and patient's preferences.
Conclusion: The consensus statements were distilled into a decision pathway. The panel recommendations and decision pathway will help healthcare professionals, both ostomy specialists and non-specialists, to consider using convexity pouching systems in the immediate post-operative period.

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PI99

Fecal Odor and Its Psychosocial Impact on an Ostomate's Quality of Life

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Significance to Practice: Quality of life is a key concern for individuals with ostomies and for the WOC nurses who care for them. It is important for ostomy nurses to identify and address the factors that impact quality of life. This study found fecal odor to be a leading cause of stress and embarrassment for ostomates in various social situations.

Purpose: The study was designed to gather qualitative data regarding the impact of fecal odor and odor management strategies on ostomates' quality of life. The goal was to gather information that would inform ostomy nursing practices and patient education.
Process: A Likert scale survey was created and posted on various social media sites frequented by ostomates to collect detailed feedback from ostomates with fecal diversions regarding fecal odor, the use of ostomy odor control products, and their effectiveness.
Outcome: The ostomates' responses varied depending on the type of ostomy, type of pouch, and the use of odor control products. Two hundred and forty two ostomates with fecal diversions responded to the survey. Of those surveyed, 61.6% of the ostomates utilized an odor control product. Surprisingly, ostomates with semi-solid to solid stool reported less embarrassment or stress in social situations compared to ostomates with liquid to mushy stool. On average, 69.1% of ostomates reported being embarrassed by ostomy odor in public or in social situations regardless of whether or not they used an odor control product (61.4% for those who used an odor control product and 78.4% for those who did not). Overall, the ostomates' responses indicate that better odor control products and methods are needed. WOC nurses need to provide more education and follow-up regarding odor control products and strategies to reduce odor. Survey results suggest such information may significantly reduce the psychological stress ostomates feel because of ostomy odor.

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PI100

Initial Contact Area test to show better fit to different peristomal body profiles

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Topic: When applying ostomy products, it is important to create optimal contact between the skin and the adhesive ostomy solution. When failing to do so the risk of leakage increases. Adhesives can have a great adherence to the skin, but if the contact near the stoma is poor, an instant leak can occur leading to peristomal skin complications (Carlsson et al. 2016). First step in reducing risk of leakage comes from a secure fit between adhesive and the peristomal area (Colwell et al. 2017, Shiraishi et al. 2020). To accommodate for different body profiles (flushed stomas, curves, bulges or hernia) a portfolio of products to support the different body profiles and stoma shapes and sizes, is available for users.
Purpose: By developing the Initial Contact Area test, we can quantify how secure the fit is in terms of product area in contact with the skin. The larger the initial contact area, the greater the fit of the ostomy solution and thereby a reduction in the risk of leakage.
Process: By 3D-scanning users, we create different silicone phantom bellies, which represents a handful of body profiles. By adjusting silicone content, we mimic the upper tissue layers of the abdomen, giving a more realistic resultant application force. The ostomy solution then shapes more realistically to the belly. To show the fit, the belly is dusted with powder before application. Once the solution is pressed over the belly, it forms to the profile. Parts in contact with the belly are colored by powder and corresponds to the contact area. The degree is found by subtracting images from before and after the test over the total area of the product.

Outcome: The different body profiles show the difference in initial contact area when applying different ostomy solutions and give guidance to the right fit.

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PI101

new solution helps prevent pressure ulcers & nurse injuries and improves patient experience

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New Solution Helps Prevent Pressure Ulcers & Nurse Injuries, and Improves Patient Experience

Pressure ulcers are the #1 patient safety issue in hospitals and nursing homes. Pressure ulcers cost $50 Billion yearly (including treatment, nurse injuries, and lawsuits) (1). 95% of pressure ulcers are preventable, however there are 60,000 deaths per year due to PU's. Bed bound patients must be turned and changed every two hours (Q2 protocol). Due to this patient lifting and turning, nurses are the most injured profession in the world (2 & 3). These problems will worsen due to nurse shortages, move to post-acute care, and aging populations. Most Q2 protocols are not met due to the time it takes to turn and change a patient, and the time it takes to find nurse availability to help in the process. No previous product can be found that combines a turning and changing solution.

A new integrated disposable turning and changing solution was trialed in a large hospital to test the efficacy of its ability to reduce pressure ulcers, nurse injuries, and increase patient satisfaction. The trial was conducted for 3 weeks, for 62 patients on 6 hospital floors, with 261 nurses. All staff assisting in turning and changing were trained. Patient mix included totally dependent, extensive, assist, and moderate assist patients. 5000 disposal devices were used. 111 questionnaires were completed by the nurses. The results of the new solution were: (a) 96% made wound care easier, (b) 82% of patients felt safer & more relaxed, (c) 73% saved nurses time, (d) 69% of nurses felt less fatigue, (e) zero new PU's, and (f) zero nurse injuries. The conclusion is that the new device makes it easier for nurses to adhere to the Q2 protocol, saves them time to turn and change patients, and improves patient satisfaction.

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Research Abstracts

R01

Pressure points in children what's the difference? A comparison between adults and children on different surface types.

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Abstract

Topic/Introduction: Pressure injuries occur in all populations. The amount of pressure can lead to pressure injuries. Presently the areas of greatest pressure on different surface types in unknown.

Purpose: To compare pressure and weight distribution between children and adults on five different surfaces/mattresses and describe areas that are at greater risk for developing pressure injuries.

Methodology: There were twenty participants between 2- 9 and 10 adults 18 - 21 years of age, each participant lay on a standard coil mattress, wool surface, yoga mat, a 2 -inch and 3-inch mattress. Sensors were positioned between the participant and the mattress and recorded the pressure distribution and magnitude at 40Hz. Peak pressure, average pressure, and cross-sectional area of pressure distribution over 1 second data trials were evaluated using custom software.

Results: Data suggests a significant effect between the contact area and subject group (children vs adults; $p<0.001$). The yoga mattress had a significantly lower contact area than all other mattress surfaces ($p<0.001$). There was not a significant difference in contact area between the other four mattress surface ($p > 0.05$). Additionally, the 3" memory foam mattress top resulted in the lowest relative mean pressure for both children (P3in_Head = 16.2±7.5 mmHg) and adults (P3in_Head = 3.8±2.1 mmHg).

Conclusion: Data can inform mattress design to reduce risk of pressure injury for children.

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R02

Impact of personal protective equipment use on Canadian Healthcare Professionals

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Introduction:
Since the onset of the COVID-19 pandemic, skin conditions mainly related to the use of personal protective equipment (PPE) and frequent skin cleansing have emerged including pressure injuries, contact dermatitis, itching, and hives related to pressure.
Purpose:
To date, this is the first study of its kind in Canada. The primary purpose of the proposed study is to explore the impact of personal protective equipment use on Canadian healthcare professionals
Research Questions:
What types of PPE related skin injury are Canadian healthcare professionals experiencing?
What is the prevalence of PPE related skin injuries among Canadian healthcare professionals?
Methodology:
An anonymous, self-administered via a survey web link was emailed via provincial healthcare associations to their members. The survey was developed by 6 content experts and piloted with 25 English and 25 French healthcare professionals to establish face and content validity. A pre-determined samples size was 384 participants, actual sample size was 712. Ethical approval from the Queen's Health Sciences Research Ethics Board.
Key results:

- 6-11% of participants reported skin issues such as acne, itching, dry skin, redness or sore skin related to wearing a face mask
- 76% reported feeling claustrophobic when wearing face cover
- 25% of participants stated that they experience dry skin on the hands related to gloves, however 50% stated that they did not moisturize their hands on a regular basis
- 95% of participants reported that their mental well-being became worst since wearing facial coverings

Conclusion
The need for PPE is here to stay. Health care professional education pertaining to the prediction, prevention and management of PPE is required to support our healthcare workers

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R03

Prevalence of Skin Tears and Pressure Injuries in a Canadian Neonatal Intensive Care Unit

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Neonatal skin is at a particular heightened risk of skin breakdown due to underdevelopment of the stratum corneum and deficiency in the cohesion between the epidermal and dermal junction. Even at full term of 40 weeks, a neonate's skin is only about 60% of the thickness of adult skin. These characteristics predispose this unique population to various types of skin injury. The purpose of this study was to (1) assess the prevalence of Skin Tears (ST) and Pressure Injuries (PI) in the Neonatal Intensive Care Unit (NICU), and (2) explore possible correlational factors with ST/PI development. A one-day point prevalence study of all infants, admitted to the level three-b and level two-c units of the NICU at an acute care children's hospital, on the study date were evaluated. Assessments included a head-to-toe skin assessment and chart review. Our results demonstrated a pressure injury prevalence of 24%, with no skin tears identified. Factors that positively correlated with the presence of a pressure injury included: delayed growth curves, limited handling guideline in place and increased number medical devices attached to skin. Our NICU has recently implemented a skin care policy promoting regular use of moisturizer, humidifier, pH balanced cleansers and adhesive remover. This policy may be impacting skin tear prevention but does not specifically address the risk factors for PIs. Results of this study highlight the need of our NICU to introduce a pressure injury risk assessment tool and other preventative measures. Findings of this study indicate a high prevalence of PIs in NICU and support careful attention to skin health for skin tear reduction.

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R04

The Hypersensitive Skin of Non-Contagious Autoimune Disease Management

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Introduction. The most common type of hypersensitive non-contagious autoimmune disease prevalence is slightly increased from 10% to 30% of the chronic wounds in WOCARE Center. There is no cure for them, but managing the symptoms with proper bathing, adequate moisturizing and managing the stress may help relieve their symptoms and improve their quality of life.
Purpose. This study will analyze the symptom management of hypersensitive skin of non-contagious autoimmune disease - related with the quality of life using the ointment of Red Papua Fruit (*Pandanus Conoideous*).
Methodology. This study research design was run with the quantitative research method through a descriptive approach and a cross-sectional sample survey design. In a year, One hundred people with hypersensitive skin were invited to participate in this study as respondents. The study research is located in Indonesia, and data was collected through an online questionnaire using survey monkey. Data analysis was performed using PLS-SEM and running by Smart-PLS 3.0 version.

Results. The result is finding that the three management of the symptom such as proper bathing (0.008); adequate moisturizing (0.015) and managing the stress have positive impact with the achievement of quality of life using the extract ointment of Red Papua Fruit is supported (0.015) in bootstrapping results per each symptom management.
Conclusion. The education using the ointment will purpose the best results for managing the symptom. The ointment of Red Papua Fruit contains a high degree of *Carotenoid*, and *Tocopherol* could help reduce itching skin sensation and help the skin thicker. This study will help people with hypersensitive skin have the solution for their problems using Red Papua Fruit for other products related.

Keywords: hypersensitive skin; Red Papua Fruit; manage symptom

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R05

Is it a Pressure Injury or Is it Skin Failure?

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Purpose: To review and identify intrinsic patient factors during acute illness in the pursuit of differentiation of a pressure injury from acute skin failure.
Methodology: A 3-year, retrospective observational study on ICU patients who developed a wound to sacrum, coccyx, buttock or heel(s). We analyzed up to three organ/system failures in the study population and the patient's mortality within six months of new wound identification. All study patients had a pressure injury prevention bundle in place (Sacral foam prevention dressing, heel off-loading boots, routine repositioning schedule).
Statistics: The collected data was of 103 ICU patients. The three organ/system failure conditions we observed were acute pulmonary failure (on ventilator), acute cardiovascular failure (IV vasopressor usage) and renal failure (CVVH/CVVHD) in the study group; and analyzed patient mortality. Case mix index (CMI) was compared over the three years to assess patient acuity. Average age over the three years was calculated and reported in a separate table.
Results: We found 33% of all patients expired within six months of developing the wounds. Among the deceased patients, 67% were with three failing organ systems. In patients with two failing organ systems, 31% expired. We noticed a direct correlation between hospital acquired wounds, increasing CMI and increased mortality.
Conclusion: our findings suggest the newly developed wounds could be skin changes during acute illness related to multiple organ systems failing. This raises a question – could these wounds be classified as "acute skin failure?" Further research is recommended.

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R06

Therapeutic Effect of Polydeoxyribonucleotide in Pressure Injuries

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This study aimed to examine the positive effects of polydeoxyribonucleotide (PDRN) on the wound-healing process in pressure injuries. In this randomized controlled trial, the effects of PDRN were compared over time between an experimental group (n = 11) and a control group (n = 12). The former was administered the same dose of PDRN intramuscularly (1 ampule, 3 mL, 5.625 mg, for 5 days) for 2 weeks and perilesionally (1 ampule, 3 mL, 5.625 mg, twice a week) for 4 weeks. The primary endpoint for determining efficacy was wound healing in the pressure injuries, which was reflected by the wound surface area determined using wound measurement system. The secondary endpoint was the Pressure Ulcer Scale for Healing score, determined using Pressure ulcer scale for healing (PUSH Tool 3.0 developed by the National Pressure Ulcer Advisory Panel). After the 4-week treatment period, PDRN therapy was found to significantly reduce the wound size and PUSH score, without adverse effect during the treatment. The findings indicate that PDRN can positively modify the wound healing process in pressure injuries, and its use could improve the clinical outcomes of patients and lower the need for additional therapies or hospital stay.

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R07

Medical Device-Related Pressure Injury in Intensive Care Unit: A Cross-Sectional Study

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INTRODUCION: Pressure ulcers are one of the most common harms to hospitalized individuals, and are recognized as one of the top five causes of clinical distress. Pressure injury is usually located under bony prominences, beneath medical devices, and caused due to prolonged pressure on a particular body site by friction and/or shear. **PURPOSE:** To determine the prevalence and factors associated with medical device related pressure injury in an intensive care unit. **METHODS:** This is a cross-sectional study conducted with 125 patients in an intensive care unit in Brazil between December 2019 and February 2020. Data was collected by inspecting the skin and recording it on a form. The data were analyzed and presented descriptively and analytically. **RESULTS:** The prevalence of medical device-related pressure injury was 34%. The use of nasal catheter, fixation cord, noninvasive pressure equipment, and indwelling urinary catheter were found to be significantly associated with the presence of medical device-related pressure injuries. Renal and respiratory comorbidities, as well as the presence of infection, were positively related to the outcome. **CONCLUSION:** It is considered that there is a considerable prevalence of medical device-related pressure injury. Therefore, these devices cannot be cited as harmless to intensive care unit patients and need to be monitored.

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R08

An evaluation of the moisture management properties of a novel soft silicone adhesive ostomy skin barrier to improve peristomal skin

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Topic:
Traditional hydrocolloid ostomy flanges absorb and retain moisture directly against the peristomal skin[1]. Excessive or prolonged exposure to moisture can often lead to peristomal Moisture-Associated Skin Damage (MASD). MASD has been reported as the most common peristomal complication[2,3,4].
Purpose:
This work aims to explore the mode of action of a novel silicone adhesive ostomy skin barrier (SSB) and demonstrate how it manages moisture and reduce MASD in peristomal skin, thereby improving patient outcomes and quality of life.
Methodology:

Healthy volunteers were recruited in order to assess the vapor loss at the external surface of the soft silicone adhesive skin barrier. The vapor loss was compared to the trans-epidermal water loss (TEWL) of each healthy volunteer.
Several *in vitro* assays were performed 1) Absorbency and water vapor transfer rates (WVTR) over time, 2) The effect of humidity on WVTR, 3) Fluid retention 4) Scanning electron microscopy (SEM), to demonstrate mode of action for moisture management of the silicone adhesive ostomy skin barrier.
Results:
The novel silicone adhesive ostomy skin barrier has shown beneficial properties for moisture management in this healthy volunteer study and in several *in-vitro* assays. SEM images of the SSB demonstrate how moisture is able to pass through the silicone matrix thanks to its unique hydrophilic silicone formulation.
Conclusion:
The novel silicone adhesive ostomy skin barrier has the potential to reduce peristomal MASD which could improve patient outcomes and quality of life.

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R09

An evaluation of a novel soft silicone and traditional hydrocolloid ostomy skin barriers for their ability to prevent and alleviate Medical Adhesive Related Skin Injury (MARSI)

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Topic:
The benefits of soft silicone have been well documented as contributing to a reduction in medical adhesive related skin injury (MARSI) in other medical spaces such as wound care and incontinence[1,2] Benefits include flexibility, atraumatic removal and ability to reapply[3,4]. This study compares the adhesive qualities of a novel soft silicone ostomy skin barrier (SSB) to traditional hydrocolloids materials.
Background:
Skin stripping occurs when the adhesive bond of a material to the skin is stronger than the bond between the skins' cells, leading to the stripping of layers of cells at removal of the material. MARSI of the peristomal skin is a common complication for ostomates where skin stripping has occurred, leading to pain, risk of infection and delays to healing, all of which negatively influences their quality of life.[2]
Methodology:
A tensometer was utilized to measure the force required to remove the materials from a substrate. Performance of the SSB was compared by this method to currently available hydrocolloid materials. Further in-vitro assays in simulated extreme environments were

performed to assess the ability of the test materials to maintain its form and integrity in the presence of corrosive liquid.
Results:
The **SSB** shows significant reduction in peel force (by t-test) when compared to hydrocolloid materials. This is theorized to be a benefit of the unique mode of action of the soft silicone formulation. The ability to stay in place and maintain integrity during vigorous tests suggests the novel silicone skin barrier will stand up to extreme environments.
Conclusion:
The ability of a novel **SSB** to stay in place during the expected wear times and the reduction of peel force during changes may reduce the incidence of MARSI and improve quality of life for ostomates. Further studies are warranted for real-world experiences.

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R10

Usage of long wave infrared thermography in defining Trombley Brennan - Terminal Tissue Injuries (TB-TTIs)--A research study

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Introduction - Identifying and understanding the Trombley Brennan Terminal Tissue Injuries (TB-TTIs) has been the focus of our research in our hospital's palliative care unit over the past ten years. We have seen this presentation in over 200 patients within our hospital and health system and have published a few articles on this work. Currently, further study is warranted to validate their presentation and potential for predicting impending death.
Purpose - The purpose of this study was to identify if a TB-TTI has a unique thermal image that will differentiate this phenomenon from other wounds including pressure injuries.
Method - IRB approval was obtained prior to the start of the study. 4 RNs in the palliative care unit as well as 2 WOC nurses were trained on the computer program and usage of the long wave infrared thermography equipment. 5 patients, under the care of a palliative service in the palliative care unit who presented with TB-TTIs, were enrolled in the study. Images were captured on presentation, every 12 hours times three and then daily until patient has expired or was discharged. Images were reviewed by the imaging company and were contrasted with imaging known to be predictive of a pressure image/wound.
Results - Early analysis is indicating that TB-TTIs may have a unique thermal image that will differentiate them from pressure injuries and other types of vascular wounds.
Conclusion - This knowledge will advance the understanding of a TB-TTI and may serve to support the need to further investigate skin failure.

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R11

A randomised controlled trial of the effectiveness of multi-layer silicone foam dressings for the prevention of pressure injuries in postoperative patients

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1. Topic/Introduction
Hospital acquired pressure injuries are highly related to surgeries with general anesthesia, and maintaining immobility before and after surgery or semi-Fowler's position to prevent postoperative pulmonary complications can increase the pressure and shearing force of the sacrum and increase the occurrence of pressure injuries.
2. Purpose
The purpose of this study was to investigate the effects of prophylactic dressing using multi-layer soft silicone foam on the incidence of pressure injuries after general surgery in patients at risk for pressure injuries.
3. Methodology
This is an randomised controlled trial, conducted in a tertiary general hospital, from June to September 2021. A total of 144 patients who were hospitalized in the surgical ward and scheduled for surgery were enrolled in the study. For data analysis, the general and clinical characteristics of participants were analyzed with descriptive statistics using the SPSS 26.0 program. The chi-square test was used to test the difference in the incidence of PI and blanching erythema. The factors for pressure injury and blanching erythma were analyzed using multivariate logistic regression.
4. Result
As a result, pressure injuries occurred in the sacrum in 5 patients (6.8%) only in the control group (p=0.058). A total of 53 cases of blanching erythema occurred, 20 cases in the intervention group and 33 cases in the control group (p=0.034). In multivariable logistic regression for patients with pressure injury and blanching erythema, it was found to be related to Braden scale and pressure injuries or blanching erythema (p=0.019). Survival analysis was performed using the Kaplan-Meyer method, and a significant difference in PI-free time (survival) were revealed through dressing application.
5. Conclusion
In this study, prophylactic dressings were applied to the sacrum for pressure injury high risk patients in general wards after general surgery and found that it was effective in preventing pressure injuries.

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R12

PRESSURE INJURY RELATED TO THE USE OF PERSONAL PROTECTIVE EQUIPMENT IN HEALTHCARE PROFESSIONALS WORKING IN THE CARE OF CRITICAL PATIENTS WITH COVID-19

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Introduction: Personal photography's about health professionals with face wounds resulted from the prolonged use of Personal Protective Equipment (PPE) have been widely disseminated in social media during COVID19 pandemic[1,2]. Medical Device Related Pressure Injury (MDRPI) cause pain, discomfort, and a negative impact on quality of life and self-image[3,4,5]. **Aim:** To determine and analyze the prevalence of health care professionals faces MDRPI related to the use of PPE. **Methods**: This is an epidemiological, observational, cross-sectional, and multicenter study, conducted in Intensive Care Units (ICU) related to the care for COVID-19 adult patients, in five hospitals in three states of two different Brazilian regions, three public hospitals, one private, and one philanthropic, after approval by Research Ethics Committees. The convenience sample was composed by nurses, nursing technicians and assistants, physicians, and physiotherapists. A socio-demographic, clinical, and work variables instrument, and a physical examination of the head, ear, face, and neck were applied for data collection. **Results**: A total of 423 health professionals participated in the survey. The overall MDRPI prevalence was 25%, and the prevalence per center was 6.96%, 8.22%, and 82.22% in public institutions; 14.29% in private institution, and 4.62% in philanthropic institution. The average age of participants was 37 years, 75% female, 49% working in more than one hospital, and 97% used N95 mask as one of the PPE; 69% worked in alternate days (consecutive 12 hours). Related to the MDRPI self-prevention, 73% refer no knowledge about an institutional protocol existence. **Conclusion**: The study showed a high MDRPI prevalence on healthcare professionals faces and lack of knowledge about the hospital prevention protocol during COVID19 pandemic, even considering the research protocol data collection after the most relevant pandemic times when prevention protocols should already be implemented. Face injuries have negative impact on quality of life and harm the safety of professionals.

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R13

MEDICAL DEVICE-RELATED PRESSURE INJURY RELATED TO THE USE OF PERSONAL PROTECTIVE EQUIPMENT IN NURSING PROFESSIONALS

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Topic:Due to COVID-19 pandemic, health workers must wear personal protective equipment (PPE), to prevent and control the dissemination of the coronavirus (1,2). Medical Device-Related Pressure Injuries (MDRPI) develop from the interaction between the device in direct or indirect contact with the skin (3-5)
Aim: The study wants to describe the self-reported occurrence of MDRPI due to the use of measures and PPE, as well as to characterize the respective preventive and treatment measures in health professionals.
Methodology: Survey-type study web-based technology, with nursing professionals who worked on the front line COVID-19 National units and in partnership with the Brazilian Association of Stomatherapy. Access link was sent to health professionals with the explanatory invitation letter and the Informed Consent Form, after approval of Research Ethics Committee, between February and July 2021.
Results: 183 participants participated, 79.2% nurses (n=145), 19.1% nursing technicians (n=35) and 1.6% nursing assistants (n=3). The average age was 37 years and the average time of experience was 12,4 years. Self-reported occurrence of MDRPI associated to PPE was 80,3 %. The majority of pressure injury were classified as stage 1 (90.2%), Stage 2 (8.7%), stage 3 (1,1%). Nasal bone was the most affected area (n=126), followed by zygomatic bone (n=115), ear (n=89) and frontal region (n=71). Surgical mask was the most frequent PPE (43,7%). 74.9% of the professionals said thet their institutions didn´t have a protocol for MDRPI prevention and even so they reported the use of preventive measures such as extra-fine hydrocolloid (26.8%), transparent film (24%), and thin foam silicone (15.3%).
Conclusion: Use of PPE is essential to protect, however, even taking preventive measures, self-referenced MDRPI frequency was higher. It's imperative that health institutions have prevention protocols and provide preventive devices to professionals.

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R14

Lower Urinary Tract Symptoms among Female Patients with Systemic Lupus Erythematosus

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Topic/Introduction: Systemic lupus erythematosus (SLE) is a chronic autoimmune disease-causing inflammation throughout the body due to immune system abnormality. Although urinary bladder involvement in SLE is uncommon, patients with SLE experience an increased prevalence of lower urinary tract symptoms (LUTS) than healthy individuals. Unfortunately, little knowledge exists on the relationship between LUTS and SLE disease activity.
Objectives: This study aimed to assess LUTS in women with SLE and examine the association between LUTS and SLE disease activity.
Methodology: This cross-sectional study used a self-administered questionnaire. We recruited 110 female patients with SLE from the outpatient clinic of a university hospital between January and August of 2020. The LUTS was assessed by the International Prostate Symptom Score (IPSS) and SLE disease activity by Systemic Lupus Activity Questionnaire (SLAQ).
Results: The mean score of the IPSS of subjects was 7.75±5.74 (range 0∼35). Each symptom score of LUTS (range 0∼5) was frequency (1.51±1.48), nocturia (1.46±1.07), urgency (1.27±1.35), incomplete emptying (1.09±1.15), intermittency (0.97±1.27), weak stream (0.94±1.04), and straining (0.51±0.91), respectively. The LUTS was positively correlated with the SLAQ (r=.48, p=<.001), indicating that the subjects with higher LUTS scores showed a severer level of SLAQ.
Conclusions: A significant association between LUTS and SLE disease activity in women with SLE was identified.

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R15

Medical Adhesive-Related Skin Injury in Adult Intensive Care Unit: A Scoping Review

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INTRODUCTION: adhesive products are present in different health services, in the intensive care unit (ICU) patients use many devices with adhesiveness, such as monitoring electrodes, fixation of vascular devices, fixation of orotracheal tubes, drains and dressings. Therefore, critical patients are more exposed to medical adhesives and consequently an increase in the Medical Adhesive Skin Injuries (MARSI) risk. In addition to negatively impacting patient care and safety, it can influence the length of stay, treatment time and their respective costs. Therefore, professionals must be aware of the practices for managing medical adhesives, preventive measures for MARSI, as well as identification and treatment.
PURPOSE: identify and synthesize scientific evidence on the prevention of medical adhesive-related skin lesions in adult intensive care patients.
METHODS: it is a Scoping Review developed based on PRISMA-ScR recommendations and on the proposed Joanna Briggs Institute method. Searches were performed in the databases PubMed, CINAHL, Web of Science, Scopus, LILACS e Embase, using the descriptors "Injuries AND Adhesives AND Skin AND Medical".
RESULTS: the search identified 1286 studies, after analysis the final sample consisted of nine articles. Regarding the type of studies, two expert consensuses, three case studies, two cross-sectional studies, a prospective cohort and a literature review were obtained. The main strategies described in the studies correspond to skin evaluation, identification of patients at risk, selection of the appropriate adhesive product, proper technique for applying and removing the medical adhesive, education of professionals and patients.
CONCLUSION: The synthesized evidence made it possible to list care for the prevention of skin lesions related to medical adhesives. It is important that professionals know how to identify skin lesions related to medical adhesives and the main strategies for preventing them.

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R16

Prevalence of complicated surgical wounds and associated factors in adults treated at public hospitals

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Topic/introduction: surgical wound occurrences are preventable complications with the implementation of prevention protocols, including classification risk. The definition of associated variables to the appearance of those occurrences can contribute to the prevention. **Purpose:** to estimate the prevalence of Complicated Surgical Wound (CSW) and analyze the associated factors in hospitalized patients. **Methodology:** Epidemiological, observational, descriptive, cross-sectional, and secondary study, approved by the ethics committee, which used data previously collected from 775 patients admitted to seven public hospitals. Clinical records, interviews, and physical examinations were used as sources of information. Data from 251 patients undergoing surgery (at risk of CSW) were analyzed using the R Software for multivariate analysis with a significance level of 5%. **Results:** The sample

was mainly composed of patients from surgical or orthopedic wards (60.9%; n=143), hospitalized due to elective surgeries (73.3%; n=184), with a mean age of 48.4 (SD 18.1; 18-100y), brown skin (29,5%; n=74), predominantly men (62.6%; n=162) with Systemic Hypertension (33.5%; n = 84), and BMI in overweight or obesity (56.97%; n=143). It was identified a CSW prevalence of 6% (n=15 patients). Male gender (p=0.016) and the presence of ecchymosis (p<0.001) increased the probability of developing the wound by 8.5 and 8 times, respectively (95% CI 1.6-156.9; p=0.04; 95%CI 2.6-24.9; p<0.001). **Conclusions:** A prevalence of CSW of 6% was identified in patients hospitalized in public institutions in the Brazilian Amazonas largest urban region, mainly men and with ecchymosis. The results contribute to a better understanding of the epidemiology of the condition, with important information for its prevention and early detection.

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R17

Scoping Review of COVID-Skin Manifestations for Pressure Injury Differentiation at the Point of Care

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Introduction:
Pressure injuries are costly to the patient and healthcare organization, with the highest incidence consistently reported in the critical care setting. The COVID pandemic brought new skin manifestations that obscured accurate pressure injury identification, treatment, and reporting. As we emerge from the pandemic, clinical decision making tools that guide accurate pressure injury identification and differentiation will be essential to high quality care and mitigating risk.
Purpose:
The purpose of this study was to analyze published evidence, to elucidate characteristics of COVID-related skin manifestations and use that information as the framework for a "quick look" tool for pressure injury differentiation at the point of care.
Methods:
A three-phase scoping review was conducted using the Arksey and O'Malley framework. Of 82 full text articles with primary quantitative data, 66 were included in the final analysis. Clinical presentations of COVID-related skin manifestations were abstracted, categorized, and

analyzed. Trends were identified and compared to established pressure injury characteristics and incorporated in the "quick look" tool.

Results:

This analysis included 1360 patients with diagnosed COVID-related skin changes. The sample was comprised of 126 (9.3%) pediatric patients and 1234 (90.7%) adults. Rashes were the prevailing presentation (n=819, 60.2%), followed by lesions 38% (n=516), and non-specific other (n=25, 1.8%). Although some COVID-related lesions present with characteristics similar to pressure injuries, objective assessment of pathophysiology, risk factors, location, and distribution pattern can guide differentiation at the point of care.

Conclusion:

This study adds clarity to the process of differentiating COVID-related skin manifestations from pressure injuries by identifying relevant characteristics and incorporating them into a clinical decision-support tool. The "quick look" tool allows the nurse to use objective patient assessment findings to rule out non-pressure related skin injuries. This may improve the effectiveness of wound treatment, accuracy of pressure injury reporting, and ultimately clinical and financial outcomes.

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R18

Is There a Difference? TWO Negative Pressure Wound Therapy (NPWT) Systems are Compared for Accurate Pressure Delivery and Efficient Fluid Removal

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TOPIC / INTRODUCTION

Negative pressure wound therapy (NPWT) systems must have certain technical capabilities to effectively deliver therapy. The International Consensus Review for NPWT Systems, by the European Wound Management Association (EWMA) states that NPWT systems containing an electronically-controlled feedback loop ensure maintenance of set pressure, guarantee the effectiveness of therapy and provide higher patient safety.[1]

PURPOSE / METHODOLOGY

Not all NPWT systems have the technical capability to meet all these standards, which can potentially lead to complications in wound healing. [2,3] The objective of this investigation was to use a simulated wound model to compare the ability of 2 commercially available NPWT systems to (1) maintain set pressure in a simulated wound bed when placed at different heights in relation to the "wound" and (2) to efficiently remove a 150 ml of simulated wound fluid. Testing was conducted at an independent third-party laboratory.

RESULTS

The experimental results supported that System A* was able to consistently maintain the selected pressures (-125 & -75 mmHg) at the wound bed at various levels of the system relative to the wound. System B+ was 30 mmHg below target pressure (-120 mmHg) when placed 1m higher than the wound. When a 150ml fluid bolus was introduced, System A* efficiently cleared fluid (89%) in 20 minutes and consistently delivered set pressure (-125 mmHg) upon fluid removal.[4,5] System B+ failed to remove any detectable level of fluid

throughout the study period and was unable to maintain the target pressure (-120 mmHg) at the wound bed.[5]

CONCLUSION

It is critical that commercially available NPWT Systems deliver on all three fundamentals (A, B, C) of NPWT. Systems that are unable to deliver set pressure to the wound bed (Fundamental A) and efficiently remove wound fluid (Fundamental B), may negatively impact the six mechanisms of action and hinder healing.

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R19

Microbial transfer by intermittent catheters; an evaluation of the effectiveness of protective features

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Background: Urinary tract infections (UTIs) are frequent and can lead to life threatening conditions. Each time a patient self-catheterizes, the risk of pathogens entering the urinary tract increases [2, 3]. Limiting the amount of exposure the catheter has to touch contamination of the catheter surface when in use could help reduce introduction of pathogens into the urinary tract [4].

Purpose: The purpose of this study was to compare five marketed hydrophilic intermittent catheters (HIC) with protective features including either a protective sleeve or protective tip, protective sleeve and cap using an *in vitro* assay that tracked the bioburden of touch transfer during a simulated use of the catheters.

Methods: Five brands of HICs with protective features were tested using simulated catheterization, per respective instructions for use (IFUs). Unsheathed versions of each sleeved HIC were also tested to act as controls. Gloved hands were contaminated, as well as the meatus of the male anatomical model penis, and simulated intermittent catheterization was performed. Various parts of the protective features of each catheter and of the catheters themselves were tested for bioburden levels. This novel test method delivers a quantitative approach measuring the effectiveness of the HICs' protective features.

Results: HICs with a protective tip and sleeve demonstrated more than a 96% reduction in microbial transfer of uropathogens compared to other sleeved catheters without a protective tip.

Conclusion: This study assessed HIC effectiveness using methods that would not be possible or ethical to test in a clinical setting. The data demonstrates that HICs equipped with both protective tip and sleeve offer the most effective protection against pathogen transfer during catheterization and may reduce the risks of UTIs due to pathogen transfer.

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R20

Impact of a novel digital ostomy device supporting ostomy care on quality of life, leakage events and worry about leakage

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Topic: More than 90% of people with a stoma worry about leakage, with associated reductions in quality of life (QoL) and significant psychological morbidity. Consequently, they use different strategies to cope, such as changing appliances more often, restricting activities or using extra supporting products.
Aim: To test the impact of a novel digital ostomy device (encompassing a digital stoma leakage notification system) in subjects with fecal stomas who experience and worry about leakage.
Method: A prospective, single-arm, pilot study recruited 25 experienced users to test the novel digital ostomy device (test product) for 3 weeks. Subjects were provided a product size appropriate for their baseplate and completed questionnaires at baseline and again after 3 weeks trial.
Questionnaires evaluated; leakage episodes, leakage worry (5-point scale), leakage impact measured by the Ostomy Leakage Impact (OLI) tool and product-related QoL measured by the Ostomy-Q.
Results: Mean age was 56-years, 60% had an ileostomy, and 40% were females. Mean episodes of leakage outside the baseplate decreased significantly from 2.8 episodes in 3 weeks at baseline to 0.5 with test product ($p<0.001$), while worry about leakage to a high or very high degree decreased from 48% to 4% ($p<0.001$).
Furthermore, there was a significant increase in the emotional domain of the OLI score (77.7 vs 85.2; $p=0.011$), reflecting less embarrassments, frustrations, and improved sleep. Product-related QoL also increased significantly during the trial (61.7 vs 70.9; $p=0.002$), driven by improvements in discreetness and confidence domains.
Lastly, 87% (95% CI;[66-97%]) of subjects would recommend the device to others.
Conclusion: The study showed strong improvements to emotional health with a new digital leakage notification system, driven by reductions in leakage incidents outside baseplate and in users worry of leakage. Relieving users from leakage outside baseplate and the related worry and embarrassment can lead to improvement in their QoL.

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R21

Patient Reported Outcomes on Living with an Ostomy: Reporting on Three Years of Data

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Introduction: Patient reported outcomes (PROs) have the unique ability to guide clinical practice through the collection of data directly from those who are experiencing the health condition. Longitudinal PRO data for those living with an ostomy is limited, even though PROs have been utilized in health care for many decades.
Purpose: This Observational Study of Ostomy Consumers OSO™ registry provides an opportunity to collect prospective, observational, PRO data and explore the experiences of living with an ostomy over a 5-year period. This information will aid in directing future research to support or challenge current knowledge and therefore guide future clinical practice, clinical research, and new product innovations.
Methodology: Individuals with all types of ostomies from the United States, United Kingdom and Canada complete monthly online questionnaires. The participants are not limited to a specific manufacturer. The data is collected through a confidential and Title 21 CFR part 11 compliant portal. This ethics approved study is posted on ClinicalTrials.gov (NCT03715179).
Results: With over 500 individuals enrolled and a strong participant retention rate of 90%, the data collection continues. We will present up to date data including, but not limited to, enrolment and retention rates, demographics, incidence of leakage and itching, self-reported peristomal skin conditions, quality of sleep and ostomy product usage.
Conclusion: The OSO registry is a five year longitudinal study using patient reported outcomes. This is a summary presentation of the data which has been collected over the first three years of the study. The OSO registry provides clinicians and product manufacturers with an in-depth understanding of life with an ostomy. The information obtained can influence clinical practice, encourage product innovations, and guide future research.

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R22

Burden of illness due to ileostomy depends on underlying diseases. A Danish register study

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Topic/Introduction: People living with an ileostomy is costly for the health care sector and society, and the ileostomy also impacts the life of the patient. Ileostomy creation is mainly due to colorectal cancer (CC) or inflammatory bowel disease (IBD).
Purpose: To examine the clinical and economic burden for people living with an ileostomy due to CC or IBD in Denmark.
Methodology: Cases with ileostomy creation and background diagnosis were retrospectively identified between 2002-2014 in a Danish registry study and matched 1:4 to controls. Healthcare resource utilization (HRU) and societal costs, 1- and 2-years after ileostomy creation were estimated for the CC and the IBD groups and their matched controls.
Results: 1270 and 1663 people with an ileostomy due to CC or IBD with a mean age of 69 and 48 years respectively, were identified. In year 1, the CC group adjusted for controls had per person year; 2.5 hospitalizations, 27.8 days in hospital and 23.4 outpatient visits. The corresponding numbers for the IBD group were; 1.5, 16.7 and 16.6 respectively. The control-adjusted direct health care cost was €28.242 in CC and €13.731 in IBD. The difference in indirect costs (foregone earnings) was estimated at €1,573 for the CC group and €5,216 for the IBD group. In year 2, corresponding figures for the CC group were; 1.2 hospitalizations, 7.6 days in hospital, 11.7 outpatient visits and for IBD group; 0.9 hospitalizations, 5.3 days in hospital, 8.9 outpatient visits. The control-adjusted total direct health care cost was €12.990 in CC and €7.973 in IBD. The difference in indirect costs was estimated to €2,625 for the CC group and €5,862 for the IBD group.
Conclusion: The background disease defines the short and long term clinical and economic burden after ileostomy surgery and should be taken into consideration in the long-term follow-up.

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R23

Burden of illness due to urostomy creation. A Danish register study

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Topic/Introduction: Urostomy creation has substantial impact for the individual as well as for society. Few studies globally and none in Denmark have estimated the overall clinical and economic impact associated with an urostomy.
Purpose: To examine the short (1-year) and long-term (2-year) clinical and economic impact of urostomy creation from a national Danish healthcare perspective.
Methodology: Cases with an urostomy creation between 2002-2014 were retrospectively identified in the Danish national registries and matched 1:4 to controls on age, gender, marital status, municipality, educational level and index year. The clinical burden was determined as

health care utilization, and the related cost was estimated based on Danish health cost registries.
Results: A total of 3065 people living with an urostomy were identified; mean age 65 years and male/female ratio of 70%/30%. In year 1, people with an urostomy vs controls had, per person year, significantly more stoma related hospitalizations (2.9; 0.3 p=0.000), days in hospital (17.8; 1.6 p=0.000) and outpatient visits (17.0; 3.3 p=0.000). Total direct health care cost for people with an urostomy vs controls was €19,673 vs €3,692 with indirect costs (foregone earnings) estimated to €1,395. Societal net cost per patient, including transfer payments, was estimated to €19,140 vs controls. In year 2, the corresponding figures were; stoma related hospitalizations (1.6; 0.3 p=0.000), days in hospital (7.9; 1.4 p=0.000) and outpatient visits (12.9; 3.4 p=0.000). Total direct health care cost was €12,969 vs €3,877, and indirect cost was €2,276. The societal net cost was €13,419.
Conclusion: People living with an urostomy bring on a very high clinical and economic burden to the Danish health care system compared to a matched population in terms of health resource utilization and costs in both the first- and second-year post urostomy creation.

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R24

Stomal faecal leakage outside the baseplates causes a significant increase in health care resource use

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Topic: One of the most frequent and impactful issues reported by people living with a stoma is that of faecal leakage outside the baseplate (LOB). Studies suggest that upwards of 91% worry about leakage, while 26% had experienced LOB and onto clothes in the last month. The emotional and psychological effects to ostomates is well documented however the effects of these events to the health care system is poorly understood.
Purpose: The aim of the study was to investigate the frequency of faecal LOB and its burden in terms of health care resource utilisation.
Methodology: An online multinational survey was sent out to people living with a stoma in five different countries during 2021. The survey was distributed through a commercially owned database of people who had consented to take part in market research. The survey included questions on frequency of faecal LOB (2-week recall) and its impact on stoma appliance change pattern, supporting product usage and contacts with healthcare professionals.
Results: A total of 602 people living with a colostomy or ileostomy completed the survey. The respondents reported having on average 1.1 LOB events during the last 2-weeks. When experiencing these events 22.6% of respondents reported contacting a health care professional, while 25.5% reported increasing the change frequency of their stoma appliance and 21.3% reported increasing the use of supporting products for a period of 4.3 and 5.2 days respectively. A small number of respondents (6.4%) also reported changing their baseplate type (flat/convex/concave), while 8.4% would explore another brand of stoma appliance.
Conclusion: The study suggest that LOB is both frequent and cause a significant increase in the use of health care resources. Innovations with the potential to reduce these events could provide a significant value to the health care system.

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R25

Investigating correlations between the Ostomy Leak Impact tool and the Short-Form 36 version 2; Health-Related Quality of Life in Ostomy Care

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Topic: Quality of Life (QoL) for people living with a stoma is an important outcome measure when assessing patient care and evaluating new health care technologies. Different disease specific tools have been developed to measure QoL in Ostomy Care; however, additional research should be conducted to ensure the quality and appropriateness of these measures.
Purpose: To investigate the correlation between two validated QoL measures: Short-Form 36 version 2 (SF-36v2) and the Ostomy Leak Impact (OLI) tool, to provide a better understanding of the relevance of the OLI tool and its clinical use.
Methods: In 2020 an online multinational survey was distributed to people living with a stoma from five different countries. The survey was distributed through a commercially owned database consisting of people who had consented to participate in market research. Questions included demographics, the SF-36v2 and the OLI tool. Pairwise correlations were calculated using Pearson's Correlation Coefficient.
Results: A total of 860 people responded to the survey; of those 399 had an ileostomy, 332 had a colostomy, 134 had a urostomy and 6 had a jejunostomy (some had more than one stoma). The study found statistically significant ($p<0.05$) positive correlation between all three domain scores of the OLI and the SF-36v2 domains. Key findings included strong correlations between the Usual and Social Activity domain of the OLI and the Mental Health component score of the SF-36v2 ($r=0.554$); and between the Coping and in Control domain of the OLI and the Quality Adjusted Life Years score of the SF-36v2 ($r=0.528$).
Conclusion: The study found statistically significant positive correlations between all the domains of the OLI and the SF-36v2. The moderate to strong positive correlation between the majority of the domains suggests that the QoL captured by the OLI tool is relevant to Health-Related QoL that is measured by the SF-36v2.

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R26

Predicted UK Health Care associated cost-savings and Health-Related Quality of Life benefits of introducing a Novel Digital Ostomy Device to support Ostomy Care

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Topic In those living with stoma, leakage outside the baseplate (LOB) is reported to cause high levels of psychological morbidity. It's also suggested that LOB events lead to more frequent use of Health Care resources.
Purpose: This study assessed the predicted benefit of reduced LOB events, secondary to the use of a novel digital ostomy device (NDOD), in terms of Health-Related Quality of Life (HRQoL) and health care resource utilization (HCRU).
Method: A cost-utility analysis (CUA) was developed based on the results of a prospective clinical pilot study testing a NDOD (encompassing a stoma leakage notification system). This demonstrated an 82.1% reduction in the risk LOB over a trial period of 3 weeks (2.8 vs 0.5; $p<0.001$). The CUA consisted of a framework of data collected from; (i) a UK-based Time Trade-off study which found LOB was associated with significant impact on HRQoL, (ii) HCRU impact caused by LOB identified from market research surveys, (iii) stoma appliance costs derived from publicly available UK reimbursement prices as unit costs weighted through UK Market share data and (iv) similarly, unit costs for health care services were determined based on the UK primary and secondary sector.
Results: Costs directly associated with LOB estimates an average cost to the health care system of £21.59 ($28.92) per event, in terms of costs related to supporting products, stoma appliances, and treatment. If the NDOD-associated reduction on LOB was extrapolated for a population of 1,000 ostomates over a 4-week period, savings of £2,683 ($3,575) as well as 0.80 Quality Adjusted Life Years could be gained. Sensitivity analyses suggest that the results are robust.
Conclusion: The introduction of a NDOD that helps people living with a stoma avoid LOB could significantly reduce health care spending and concurrently increase HRQOL.

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R27

A Prospective, Observational Study of a Novel Lift-Compatible Safe Patient Handling Support Surface in the Intensive Care Unit

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Introduction
Pressure injuries and musculoskeletal injuries are two of the most common and costly preventable harms in healthcare. For many healthcare organizations, gains in the mitigation of these preventable harms were lost as the COVID pandemic brought new challenges to safe, high quality practice, including resource-intensive care, staffing shortages, education paucity, and financial instability. In this new environment, hybrid devices that can simplify and standardize practice, while addressing multiple care focuses, offer promise.
Purpose
The aim of this study was to evaluate exertion, patient- and caregiver-protective capabilities, workflow integration, and financial benefits of a hybrid lift-compatible safe patient handling support surface (LC-SPH-SS).
Methodology
This single-site pilot study was done in the surgical intensive care unit of an acute care hospital in Midwest United States. A standardized data collection form was designed and automated. Product training was provided. Twenty-six reviewers assessed twenty separate data points during safe patient handling and mobility (SPHM) activities. Aggregate data was analyzed and outcomes reported.
Results
Turning, boosting, lateral transfer, and vertical transfer required light effort (Modified Borg 2). Bed to chair mobility required very light effort (Modified Borg 1). Most SPHM tasks were accomplished with two caregivers. Participants rated the device favorably for 5 caregiver-centric and 3 patient-centric features, focused on ease of mobilization, sustained positioning, comfort, and workflow. Participants rated the device as excellent or good for 5 product-focused features affecting ease of use and patient and caregiver safety. Potential cost savings were realized through the replacement of eight SPHM devices by the hybrid LC-SPH-SS. No sacral or ischial pressure injuries developed among included patients.
Conclusion
Hybrid technologies allow healthcare organizations to streamline practice. This study demonstrates that a lift-compatible SPHM support surface can alleviate waste, promote consistent care, improve workflow, prevent patient and caregiver harm, and save time and money.

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R28

Improving IC compliance by patient support programs: A pilot survey from Norway

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Topic/Introduction: A compliant voiding routine when using intermittent catheterization (IC) is important, since infrequent voiding can lead to larger bladder volumes that may overextend the bladder and increase the risk of UTIs. According to European Association of Urology, the average frequency of catheterizations per day is four to six times and will depend on the reasons for using IC.
Purpose: The objective of this Norwegian pilot survey was to explore the impact of information shared via a patient support program on IC compliance (frequency) and fluid intake in a Norwegian sub-cohort using a survey approach.
Methodology: A survey was distributed among 1400 IC users who were enrolled in a patient support program. The survey included questions addressing IC frequency and fluid intake via patient recall. Respondents were asked about changes in above mentioned parameters before and after having received information via different information channels through the patient support program. All people included in the survey had been using IC for a minimum of 1 year.
Results Including Statistics: 423 out of 1400 IC users responded to the survey and descriptive statistics were applied to analyze results. A total of 95% of the enrolled IC users had received information from the patient support program during the past year. Overall, 47% had changed their routines, whereof 23% had increased their IC frequency (from 4.2 to 4.7 per day on average), 26% had increased their fluid intake and 19% had changed the type of IC.
Conclusion: This pilot survey from Norway implies that targeted information shared through patient support programs via different channels can assist the IC user in obtaining an improved routine, thereby possibly reducing the risk of UTIs. A prospective survey would be needed to validate the results further.

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R29

An Assessment of Support Surface Integrity in Acute and Post-Acute Healthcare Facilities

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Topic/Introduction
The integrity of patient support surfaces

Purpose

A common care feature across healthcare is the support surface upon which patients lay, yet the integrity of these surfaces is rarely monitored or inspected.[1] We report the results of a service program designed to assess support surfaces replacement needs in acute and post-acute healthcare facilities.

Methodology

Assessments of support surfaces were conducted with the permission and cooperation of the healthcare facility. After recording demographic information, sheets were removed or rolled back for inspection. Each surface (mattresses, table pads, and stretcher pads) was assessed for specific failure modes: holes or tears, poor response (rebound or exuding liquid) when compressed, stains, internal damages, thinning areas and torn zippers. A surface was scored as RED (replace immediately), YELLOW (reassess in 6 months) or GREEN (suitable for continued use) based on the number of failure modes assigned to it.

Results Including Statistics

	Acute Care	**Post-Acute Care**
# of facilities	85	522*
# of surfaces	5,121	36,207
% of Foam surfaces	73.9%	92.1%
Ave. bed age ± SD	5.19±4.13	5.01±3.98
% RED	59.0%	50.6%
% YELLOW	1.7%	0.86%
% GREEN	32.0%	36.53%
% COULD NOT BE RATED	7.2%	12.02%
Primary failure (%)	Holes or tears (17.1%)	Poor response to compression (17.2%)
Secondary failure (%)	Poor response to compression (6.2%)	Holes or tears (6.3%)
Ave. age ± SD of RED surfaces	7.26±4.14**	7.00±4.11**
Ave. age ± SD of YELLOW surfaces	4.38±2.47	5.11±3.51
Ave. age ± SD of GREEN surfaces	2.59±2.62	2.65±2.19
Increased odds of failure with each one-year increase in age	67.6%	73.5%

* 484 nursing homes **Ages of RED and GREEN surfaces are statistically distinct

Conclusion

The majority of support surfaces are unsuitable for patient care. The contribution of support surfaces to patient complications such as pressure injuries and infection transmission warrants further investigation.[2,3,4]

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R30

Assessing the Gentleness of a New Hybrid Drape Compared to Traditional Acrylate Drape

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Topic: The stratum corneum provides a first line of defense against environmental insults and pathogens, regulates hydration, and initiates repair processes.[1] To help preserve integrity of periwound skin and improve patient experience with negative pressure wound therapy, a novel hybrid drape was developed.[2,3]
Purpose: This study assesses the impact of repeated placements and removal of hybrid drape compared to traditional acrylate drape on the volar surface of the forearm.
Methodology: This study was performed using an institutional research board approved protocol. Hybrid drape or acrylate drape (1 in x 3 in) strips were placed on each volar forearm of 44 healthy humans. Drape strips were removed and replaced with new strips every 2 – 3 days for a total of 5 times. Transepidermal water loss (TEWL) was measured at baseline and after every drape removal. Drapes from the first and fifth removal were saved and stored at -80°C. Bicinchoninic acid (BCA) analysis was performed to determine quantity of protein removed from the skin after the first and fifth drape removal and IL-1a (an inflammatory cytokine) was measured using the fifth drape. Subject reported pain upon drape removal was assessed using a 100 mm long visual analogue scale.
Results: TEWL change from baseline to after the 5th removal was higher for acrylate drape ($p<0.05$). The hybrid drape removed less total protein at the fifth drape removal ($p<0.0001$). Post-hoc analysis showed significantly less IL-1a generated following the fifth drape removal for the hybrid drape ($p<0.0001$). Post-hoc analysis also showed that subject reported pain was significantly higher with acrylate drape at all drape removals ($p<0.001$).
Conclusion: The hybrid drape was shown to be gentler to skin than traditional acrylate drape with respect to changes in barrier function as measured by TEWL, decreased protein removal, decreased production of IL-1a, and decreased pain upon removal.

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R31

Trial of an Improvised Dressing for Remote and Conflict Areas of Tropical Developing Countries

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Topic: This research is part of a lengthy quest to provide an evidence-based solution for wound management in remote and conflict areas of tropical developing countries. Having described usual practice in detail, we are now trialing dressing protocols in a controlled, but still tropical, setting.
Research Questions: Does a cut-to-fit perforated food-grade-plastic-based improvised dressing with a periwound moisture barrier cream and an absorbent over the perforations decrease pain and improve quality of life, and is it safe, effective, and acceptable for managing sickle cell leg ulcers in Jamaica?
Study Design/Method: This three-armed 12-week evaluator-blinded randomized controlled trial compared improvised dressings to a negative control (wet-to-moist dressings, equal or superior to usual practice), and a positive control (the advanced wound dressings with the strongest evidence supporting use in a tropical climate, which are polymeric membrane dressings). All three protocols were rigorously defined. Dressing changes were conducted by the patients, who WhatsApped wound photos and other data to the investigators weekly.
Results: All three groups saw improvement when compared with their previous usual practice. Improvised dressing participants' pain and quality of life were improved when compared with these participants' previous dressings, and when compared with the experience of participants in the wet-to-moist dressings study arm. Compared with the wet-to-moist dressings group, participants in the improvised dressings group were far less likely to develop wound infections and their wounds were far more likely to decrease in size. The improvised dressings were not dramatically inferior to the advanced wound dressings, and they were significantly less expensive. Participants in all three groups found the improvised dressings acceptable.
Conclusions: The improvised dressings performed well in the tropical environment. Participants could perform dressing changes unaided. The improvised dressings did not promote infection or clinically significant maceration; they did promote healing, pain relief, and improved quality of life.

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R32

The Ostomy Skin Tool 2.0: a new instrument to assess peristomal skin condition

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Topic: Peristomal skin complications (PSC) are common among people living with an ostomy. To avoid a possible PSC, it is important to check the peristomal skin condition on a regular basis and to seek professional help to avoid severe complications. The original Ostomy Skin Tool is used by healthcare professionals (HCPs) to assess the peristomal skin and is primarily based on visual complications: discoloration, erosion, and tissue overgrowth, whereas complications like pain, itching and burning are not assessed, unless discoloration is present.
Aims: To develop a more sensitive tool that captures patient reported complications and objectively assesses discoloration. To define a combined score to classify different health states.
Method: The new tool was developed based on interviews of HCPs and people with an ostomy to identify the most common symptoms and visual signs associated with PSCs. An artificial intelligence algorithm was used to assess discoloration . The combined score and classification of severity categories were established using a Decision Tree (DT) methodology. This was done in collaboration with a HCP expert panel and an online consensus driven approach with national boards of ostomy care nurses.
Results: Ten people with an ostomy and fourteen HCPs participated in the interviews. Top seven complications were selected: pain, itching, burning, weeping, bleeding, ulcerated and discolored skin. A patient reported outcome questionnaire was developed. The DT model divided the complications into three hierarchy groups: 'compromised broken skin', 'sensation symptoms', and 'discoloration'. A combined score between 0-3 represented four different health states of peristomal skin condition: 'not treatment required', 'mild', 'moderate', and 'severe' were defined.
Conclusion: The Ostomy Skin Tool 2.0 provides a sensitive tool that enables a close follow-up of the peristomal skin condition and a combined score that can be useful to define different health states.

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Prevalence and associated factors of medical adhesive-related skin injury in critical patients: Multicentre study

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Introduction: Medical adhesive-related skin injuries (MARSI) is defined as an occurrence in which erythema and/or other manifestation of skin trauma or reaction (including, but not limited to, vesicle, bulla, skin erosion or epidermals tear) persists 30 minutes or more after adhesive removal. **Aim:** To identify and analyze the prevalence and associated factors of MARSI in critical patients in intensive care unit (ICU). **Method:** This is an epidemiological, cross-sectional study with a quantitative approach conducted in 2018. The study was conducted ICUs of nine public, university and private hospitals in southeast Brazil. The data collection occurred in a single day according to the authorization of the nursing board. The study included ICU patients aged 18 years or older. All data were collected on paper and then entered into electronic health record. The data were analyzed using descriptive and inferential statistics through the chi-square, Fisher's exact test, T-test, Wilcoxon-Mann-Whitney and logistic regression analysis, considering a 95% confidence interval in the univariate analysis. **Results:** The sample was composed by 377 patients, mean age 62.7 years old (SD 17.2), with predominance of male (199/52.8%). In total, 61 patients had MARSI, resulting in a global point prevalence of 16.2%. The MARSI were caused mainly by mechanical trauma and the most prevalent subtype was the skin epidermal stripping (31/46.3%), followed by the skin tears (21/31.3%). The most affected regions were the chest (16/23.8%) and the abdomen (14/ 20.8%). Most injuries were caused by transparent films (44.8%), microporous tape (20.9%) and electrodes (14.8%). **Conclusion**: The prevalence of MARSI in critically patients in the present study was 16.2% and the factors associated with its occurrence were the use of corticosteroids, sedation, catheter for feeding, drains, presence of pressure injury and malnutrition.

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An Autologous Blood Clot, Utilized for Treatment of Pressure Ulcers

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Introduction: Pressure ulcers (PU) continue to be a huge burden on the health system in particular the nursing staff, affecting mostly patients in intensive care units and long-term care settings[1]. Chronic PU remains in the inflammatory phase which results in deterioration of the extracellular matrix (ECM).
Autologous whole blood clot, was found to be safe and effective in treating chronic wounds[2]. The autologous whole blood clot creates a protective scaffold acts as an ECM, reestablishing the communication between the cells in the wound environment, and creating a protective barrier[3].
Purpose: To evaluate the safety and efficacy of autologous whole blood clot treatment in PU in a real-life setting.
Methodology: The patients in this study were sourced from a Registry study (NCT04699305). The autologous whole blood was created from the patient’s own peripheral blood at the point of care. Statistical analysis on the efficacy of autologous whole blood treatment was performed using a Wilcoxon Signed Rank.

Results: A total of 25 patients were evaluated and 22 had sufficient data for inclusion. The mean wound size at baseline was 20.66 cm^2. By week 4, the mean percent area reduction (PAR) was 77.94%. 36.36%of the patients achieved complete healing by week 4, and 94.44% of the patients exceed 40% PAR at week 4. By week 12, the mean PAR was 96.23% with 18 patients achieving complete wound healing.
Conclusions: Autologous whole blood is an advanced treatment and was found to be highly effective in treating chronic PUs providing a moist and clean environment, reconstruction and reorganization of the ECM, assisting in induction and adhesion of growth factors, promoting the wound healing process. The potential of bringing an affordable cost-effective advanced bedside treatment presents a possibility of a new solution to complex cases with the potential of drastically reducing the burden on nursing staff.

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